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TRUSTS ACCORDING TO OFFICIAL INVESTIGATIONS.

On January 25, 1888, the House of Representatives of the Fiftieth Congress passed a resolution directing its Committee on Manufactures to inquire touching the names, number, and extent of the combinations known as associations, trusts, pools, and by other like titles, alleged to exist in this country for the purpose of controlling or curtailing the production or supply of various products. The committee was to search into their methods of combination and of doing business, their effect upon the prices of the necessaries of life or other commodities of the country, upon its commerce, whether internal or foreign, and upon its revenue from import duties, also into all related matters which might call for or suggest legislation by Congress, and to report with recommendations, if any it should have to offer. Authority was given the committee to sit during sessions of the House, to compel the presence of persons and papers, and to swear and examine witnesses.

The investigation began on March 8, and was continued at frequent intervals through the summer. Since the Congress convened in its second session, the committee has not yet met. Its work, so far as it went, consisted in examining the Sugar, Standard Oil, Whiskey, and Cotton Bagging combinations. The report upon these is printed, and the principal matters disclosed by it will be set forth in this article.

On February 16, 1888, the Senate of the State of New York, by resolution, ordered its Committee on General Laws to investigate "into all matters relating to the formation of certain combinations and agreements commonly known as 'trusts,' and the effect of the same upon the public interests, and the persons, corporations, and individuals composing them." This committee sat at the County Court House in New York City every week-day but one from the 20th to the 29th of February. The time which the Senate allowed for the inquiry ended March 1. Although it was much too brief for the purpose, many facts of great interest were elicited. The report of this committee, too, has been printed, and will be our authority upon the matters which it, but not the Congressional committee, considered.

On February 29, 1888, the Canadian House of Commons raised a special committee "to examine into and report upon the nature, extent, and effect of certain combinations said to exist with reference to the purchase and sale, or manufacture and sale, in Canada of any foreign or Canadian products. This committee began its inquiries on March 6, and continued them till May 8. Twenty-six sessions were held, and sixty-three witnesses examined. The enterprises here called to account were mostly small, but compact, efficient, and confident. Some of them displayed peculiar features of organization and administration. The report to the House of Commons, an octavo of seven hundred and fifty pages, conveniently arranged and

indexed, and every way better presented than either of the above, is before us. We shall find it to be of no small value. The closeness to one another in time of these three acts ordaining trust commissions is significant.

A number of litigations involving the nature and doings of trusts, monopolies, and the like, have recently come to judgment in the courts; and the findings upon them are now of record. Our account will be based mainly on these four sources, drawing from others only in reference to points upon which, in order to a connected view, somewhat fuller information is required.

The most diverse species of joint undertakings are popularly stigmatized as "trusts," chief among which are the following: I. Amorphous enterprises involving plurality of interest, like the New York City Milk Exchange and the Empire Storage Company of Brooklyn. II. Cases where one corporation or firm, in virtue of its peculiar power or success, is tacitly accepted by others as the standard for price-lists and methods. III. Pooling arrangements of all sorts, such as have for many years been familiar to the public. Sometimes profits are not only distributed, but earned pool-wise, several establishments being administered by a joint committee of delegates from the several boards of directors. The Independent Cottonseed Association, lately declared by the Tennessee Supreme Court to be illegal as an attempted partnership of corporations,* was an affair of this sort. IV. Agreements as to prices or production lived up to with more or less fidelity. They may be very loose and general, or more solemn, based on written covenants and sanctioned by penalties. V. Contracts, with or without such sanctions, to grant special favors or rates in return for exclusive patronage. VI. Corners, provided they are the result of conspiracy and maintained for a considerable time. This specification covers instances in which a single cor-

*See Mallory *et al. v.* Hananer Oil Works, 8 *South-western Reporter*, 396 seqq.

poration or firm contracts at a fixed price for the product of all the rest in the business, thus so controlling the market as to sell at an advance. Profits may also be distributed as a particular means of maintaining the combination intact. VII. Trusts, possibly so called, in which a firm or a small corporation, one or more, sells out to a larger, retaining a mortgage or a lease on its old property, and perhaps receiving in further payment shares of the purchaser's stock. Analogous to this are those instances in which the smaller corporation merely makes over to the larger a controlling portion of its stock. VIII. Trusts, properly so called, of which the Standard Oil and Sugar Trusts are models. In a trust of this firmest order, stockholders in several corporations surrender their stock to trustees, receiving in return trust-certificates issued by those trustees, the latter then becoming, in lieu of the stockholders that were, the ultimate managers of the constituent corporations.

Organizations essentially the same as some of the above have existed for centuries, being, in fact, among the oldest institutions of which history speaks. Not to go back further, the mediæval guilds may be mentioned as such. In several English towns, the *gilda mercatoria* was exactly what would to-day be spoken of as a trust. Nor were guilds the only monopolistic creations known to other centuries. Karl Braun, in volume xcvii. of the *Vierteljahrschrift für Volkswirthschaft*, tells of a gigantic pepper trust which Elector Augustus of Saxony entered into about 1560 with the then king of Portugal and a certain wealthy Augsburg merchant by the name of Roth. They proposed to secure and permanently maintain a European monopoly of pepper by buying all that arrived at Lisbon and taking it to Leipzig as a centre of distribution. The scheme broke down, it being found that more pepper grew in the world than they had supposed, and that a great

deal made its way into Europe through other ports than Lisbon.*

Even in American communities, *quasi*-trusts are by no means a new thing. Our trades-unions are nothing else but trusts over the commodity of labor. The Oil Well-drillers' Union of Western Pennsylvania, a trade-union, as comprising workingmen mostly, has in it *entrepreneurs* as well, and so approaches the veritable trust. Silent agreements as to prices have always prevailed among contiguous dealers in a given sort of goods. With wholesalers, the custom is old and not rare of fixing the minimum prices at which retailers shall vend their wares. The physicians of nearly every locality have a prescribed fee-list. So do lawyers. The writer has seen in a New England court-house a detailed schedule of prices for attorneys' services, which must have been printed not less than fifty years ago.

But it is quite true that the associational system of business is in its present magnitude a thing of recent origin. It took its life from the marked and immediate success of the Standard Oil Trust, created in 1882. The career of this Titan agency has stimulated on all hands the most earnest efforts to imitate or rival it. There is scarcely a single industry in the country which has not, either bodily or in some of its phases or departments, passed under this or that form of associate management. Reports of fresh schemes for business amalgamation literally crowd the press. Joining hands, massing energies,—

* They heaped up in the Saxony city enough to make themselves poor, but not enough to corner the European market. The king died before the bubble broke, perhaps in fear of such a disaster. The merchant committed suicide. The elector sold out his pyramid of pepper-bales, regardless of cost, with the determination to traffic in that commodity no more. In the same volume, Braun also gives an interesting account of an attempt made in the years 1824 to 1829 by the great house of Cropper, Benson & Co. in London to monopolize the cotton trade of England, under the impression, which somehow had great prevalence just then, that the negro race in America was dying out, and that without its agency cotton could not be raised. This project, too, failed most disastrously.

that is emphatically the order of the day in economic affairs.

True, not a few plans in this direction have come to nothing. Early in 1887, the manufacturers of rubber goods made an effort to combine on a gigantic scale, but without effect. They renewed it in January, 1888, with the purpose of launching a trust precisely after the Standard Oil pattern, stock to be surrendered in exchange for trust-certificates; but this time, also, the different parties failed to agree, and the scheme was abandoned. The Kentucky Whiskey-distillers' Agreement for 1887–1888, to limit production, has not, we believe, been continued, earnest as were the efforts for that result. Other like endeavors have achieved a measure of cohesion, but not the slightest ability to harm. The so-called Nail Trust is one of these. Far from oppressing, it has hardly succeeded in keeping prices at a paying level. A hot feud is said to be rending the Glucose Trust. The Lead "combine" is little but a name. A smelter in New Mexico and a refiner and a manufacturer in St. Louis pooled their interests, but, handling barely 3 per cent. of the metal's annual output, found themselves powerless to dictate its movement. Besides all such cases, one could name other combinations, vicious in purpose and effect, which, nevertheless, we need not dread, because, though perhaps not punishable, they are clearly illegal, and based on contracts which the courts have uniformly refused to enforce. Discord must blast them in a little time.

It is every wise extremely confusing to class all the above-named enterprises as trusts. They have in common only the single feature of excluding more or less perfectly old-fashioned individualism of management. Let us separate them.

First, a specimen or two of the amorphous variety. The New York committee men denounced as one of the worst monopolies which they examined the Milk Ex-

change (limited) of New York City. Its business is to gather milk from dairymen in all the country around New York, and pass it to city dealers, collecting from the latter and making payment to the former. It was found that, while it gave only from two to three and a half cents per quart to the producers, the price to families in the city was sometimes as high as ten and rarely under seven. Though handling perhaps not over an eighth of the milk consumed in New York daily, the Exchange people, in the language of one of their number, "fixed the prices so carefully" that other dealers, for the most part, adopted these, the Exchange's terms being in a way law for the entire city. Evidence was offered to the effect that the low rates to farmers for their milk had induced the use of poor feed, thus impoverishing the liquid with no diminution of price to the consumers. In 1882 or 1883, the Orange County dairymen made a long and spirited attempt to get into direct communication with the consumers, circumventing the Exchange; but they found it too powerful, and after about a year desisted from their attack.

The Empire Storage Company, limited, of Brooklyn was discovered to control nearly the whole of that city's general warehouse facilities, along with about 45 per cent. of its elevators. The gains of this monopoly came from leasing and subleasing storage-room. Witnesses admitted that prices to storers had risen since the company was incorporated,— for some articles not less than 50 per cent. One said, hereafter "there won't be much competition, it is not likely. It is hoped not. We want to destroy it all we can. Competition is a bad thing."

Classes II. and III. in our list hardly need exemplification. In illustration of Class IV., the New York investigators called to account the Standard Envelope Company of Springfield, Massachusetts, a corporation with a capital of $5,100, comprising * a number of Massachusetts, Con-

* Though not acquiring their property, herein differing from the J. M. Atherton (Whiskey-distilling) Company of Kentucky, sometimes alluded to as the (or a) Whiskey Trust. This we refer to Class VII.

necticut, and New York envelope firms. The organization was started, it was avowed, to harmonize interests, and in particular to fix the prices on what are known as commercial envelopes, the firms of the Standard Company turning out from one hundred and twenty to one hundred and forty millions of these monthly,— nearly one-half of the country's total product. On each thousand of these envelopes sold by any of the concerns, that concern was, at the time of investigation, obliged to pay twenty cents into a common fund, intended partly for contingencies, partly for profits. This tax would, in a normal month, amount to from $24,000 to $28,000. Profits were distributed according to stock held, not according to production.

"Combines" falling under V. in our classification are very numerous,— much more so, we believe, than is commonly supposed,— and constitute a well-defined type. A California corporation stipulated with certain dealers to supply them with lumber during the year at so much a thousand, the purchasers to sell meanwhile in Monterey, San Benito, Santa Cruz, and Santa Clara Counties no lumber bought from other parties. The buyers being false to their agreement, the corporation sued for damages. The court below and the court above both decided the contract void, as being a scheme to raise prices by rigging the markets, and thus contrary to public policy. The New York Court of Appeals recently had to declare a contract void because it involved limitation to the output from a certain colliery at Pittston, Pennsylvania, in order to manipulate the coal supply in Elmira, New York. For a consideration of half a cent per pound special rebate in addition to the regular jobbing discount, many retail grocers are at present making promises to sell only the wares of given wholesalers, except when customers imperatively order specific articles to be had only of other dealers.

The Wholesale Grocers' Guild of Ontario and Quebec has reduced this sort of finance to a system. Beginning as an association to arrange uniform terms of credit and discount, it has become a veritable tyrant. It imposes and collects money penalties, and excludes from its membership with much evident sense of eminent domain. It coerces the Dominion sugar refiners to sell it sugar at thirty cents a hundred less than to outsiders. It even essayed once to forbid these purchasing at all. The Guild has agreements with manufacturers of tobacco, starch, and many other staple goods, enabling it rigidly to fix retail prices. Any wholesaler standing aloof from this ring is pretty certain to be crushed.

The Coal Section of the Toronto Board of Trade is another "combine" of the same order, which seems to be the favorite one in Canada. It is a monopoly, with fifty-six participants. Most are retailers, though the half-dozen coal importers in the number hold the reins and reap the profits. The most arbitrary rules are enacted, detectives employed for surveillance over members and salesmen, oaths required of both, sometimes retroactive as well as prospective, heavy fines or expulsion being the penalties for breach. A fine of $1,000 had been imposed in three several instances. One of the victims was an American firm,—for the organization reaches hither. The Butler Colliery Company of Buffalo sold a schooner-load of coal to Messrs. Gooderham & Worts, of Toronto, without the trust's consent. What followed let us recite from the trust's own minutes: —

Resolved, That the matter of the shipments by the Butler Company be left in the hands of the Toronto committee in Buffalo to be dealt with as the importance of the case demands. *Resolved*, That, as the Butler Company have indicated their willingness to make reparation for the damage done this market through the shipment of coal to Gooderham & Worts contrary to the rules of this association, this committee are of the opinion that several thousand dollars would not be sufficient to undo the mischief, as the coal has been distributed

among a large circle of friends, who freely informed their friends that they had succeeded in beating the coal ring, and have got their coal at a large reduction from ring prices. However, in view of the prompt offer of the Company, the Coal Branch of the Toronto Board of Trade are to be as reasonable as possible in their demands, and will accept $1,000 as full satisfaction in this instance.

The Dominion commissioners further say: —

When tenders are asked for supplying coal in Toronto for government buildings, Ontario government institutions, Toronto waterworks, public schools, charitable institutions, the general hospital, etc., a meeting of the Coal Branch is called, and the price is fixed which the party inviting tenders is to pay; and the privilege of filling the contract is awarded to the member who offers the highest premium, or bonus. For instance, in 1886, for the privilege of filling the Ontario Government contract of about 2,500 tons, a premium of $1,500 was paid. The same contract, including some wood, was sold in 1887 for $1,399. The premiums thus paid are divided among the importing members in the same way as the fines. But, in order to lull public suspicion of a combination, and that the parties to be supplied were not obtaining the coal at its fair market value, other members of the Branch put in tenders at higher prices.

The Coffin-makers' and Undertakers' Trust, that in Cordage and Binding Twine, the Iron-founders' Association, the Oatmeal Millers' Association, the Biscuit Association, the Confectionery Association, the Fire Insurance Ring, and the Egg Combination, all brought to book by this Canadian inquest, were found to be constituted much like the concerns just described.

The famous Copper Syndicate is a combination of the VIth, or protracted corner, class. The core of this, as is well known, is the Société Industrielle et Commerciale des Métaux de Paris, which hopes, through the bargains it has made with all the principal producers everywhere, to command the copper product of the world. In a specimen contract existing between it as buyer and a great American company as seller, it is covenanted as follows:

Seller sells to buyer his entire output from May 1, 1888,

to December 31, 1890, at thirteen cents a pound, and, in addition, a sum equal to one-half the net profits over this price realized on the copper when resold by the Société. The seller, when required, must act as buyer's agent in America for seller's own output. Cash is to be paid for the copper on delivery in New York. For failure to deliver occasioned by strikes, accidents, or lessened productivity at the mines, lack of transportation, or other cause beyond his control, seller is not to be held responsible. To insure payment, the buyer has to keep in New York, subject to the seller's draft, satisfactory credits considerably in advance of deliveries. To the extent of the selling price, thirteen cents a pound, but no further, the seller guarantees all sales made by him in America. Differences arising between the contracting parties are to be settled by arbitration.

It is understood that since the date of the above contract the Syndicate has been reorganized, with larger capital, and more surely within the French law against monopolies. It is further believed that it has drawn into its circle a number of new mining companies in sundry parts of the world, and induced those, including the American, which were its customers before, to renew their contracts, for periods ranging from eleven to fifteen years.

The Cotton Bagging monopoly is in principle just like the Copper Syndicate, though a trifle more complex,— a wheel within a wheel. The original parties to it, buyers and sellers, the more completely to dominate the trade, became partners in a new set of contracts, with numerous other establishments not in the original arrangement, to purchase of the latter their entire production. The plan triumphed ideally, resulting in what is probably the most close and cohesive association of the kind yet seen, aside from the genuine trusts.

For combinations of our VIIth class, "trusts possibly so called," we need only advert to the innumerable cases

where great railways have secured decisive interests in smaller ones, consolidating these with themselves into general systems. Less complete is the fusion secured by the J. M. Atherton Company of Kentucky. Having, to obtain control of their business, bought the plants of five distilling corporations, it leases these plants back, each to its former owner, who carries on the industry to all appearance just as before.

We come lastly to trusts proper, of which the most conspicuous examples now before the country are the Sugar Refineries Company, the American Cotton Oil Trust, the Distillers and Cattle-feeders Trust, and the Standard Oil Trust, to create each of which stock of old corporations was lodged in the hands of trustees, who in place of it distributed their own certificates.

The Sugar Refineries Company, known as the Sugar Trust, originated in a deed of agreement dated August 6, 1887, though the organization was not in complete working order till November 1. The agreement was made by and between eight sugar-refining establishments, nearly all located in New York and Brooklyn, and representing 85 per cent. of the refining capacity this side of the Rocky Mountains. Its objects, as alleged, are: —

> First, to promote economy of administration and to reduce the costs of refining, thus enabling the price of sugar to be kept as low as consistent with reasonable profit; second, to give each refinery the benefit of all appliances and processes known or used by the others, and useful to improve the quality and diminish the cost of refined sugar; third, to furnish protection against unlawful combinations of labor; fourth, to protect against inducements to lower the standard of refined sugars; . . . and, fifth, generally, to promote the interests of the parties in all lawful and suitable ways.

Annual meetings are to be held in New York City every June. Certificate-holders may vote by proxy if they wish. No one of the eleven trustees, who possess all the stock, can, while in office, buy or sell sugar or be interested

directly or indirectly in its purchase or sale. The trustees may transfer, from time to time, to such persons as they desire to constitute officers of corporations, the number of shares of stock necessary for this purpose. The trust-certificates are in $100 pieces and the issue is limited to $50,000,000, of which only about $42,500,000 were outstanding at the time of the Congressional inquiry. The entire property of all the sugar refineries had presumably been represented by stock; but each, negotiating separately, exchanged its total stock for certificates on such terms as it could make. That is, not every hundred dollars in stock commanded such and such an amount in certificates, whatever the refinery to which it had belonged. Some companies might get more, others less. Among the stockholders of any given concern, however, exact prorating was observed, so much in certificates in return for so much stock.

The American Cotton Oil Trust had not, to the time when the record was printed, been before the Congressional committee; but the New York committee produced evidence revealing its character sufficiently for our purposes. This trust dates from 1884. It was organized precisely like the Sugar Trust. The constituents were corporations, seventy-two or seventy-three in number, with mills and refineries in various States, mostly at the South, though the Trust's general office is in New York City. Stockholders passed in their stock and received trust-certificates therefor. Of these, 417,000 were issued, par value $100. The industry to which this trust is devoted is a novel one, manufacturing and refining the oil of cotton-seed. At present its dimensions are truly vast. During 1887 the establishments in the trust crushed about 530,000 tons of seed. All parties together crushed over 700,000. The value of the trust-corporations' product from May, 1886, to May, 1887, was placed at $24,000,000. About 27½ per cent. of the oil the past year was exported.

The Distillers and Cattle-feeders Trust,* commonly mentioned as the Whiskey Trust, was formed May 10, 1887. It is constituted in all respects like the two preceding. Eighty-one distilling companies are in it, three belonging to Kentucky, the rest to New York, Ohio, Indiana, Illinois, Wisconsin, Missouri, and Nebraska. Peoria is its official and also its business centre, two-thirds of the distilleries being located there. The concerns in this trust manufacture 85 per cent. of all the alcohol and spirits produced in the country, and about 53 per cent. of all the liquors of every kind; *i.e.*, 40,000,000 gallons a year out of 75,000,000. Only about 15 per cent. of their output is whiskey. The certificate-capital is $30,000,000, in shares of $100.

But the Standard Oil Trust is the most renowned as well as the most solid and successful of the quartette. It was organized by an agreement dated January 2, 1882, though its head men began to see eye to eye ten years earlier. Its chief office is in New York City, where the nine trustees hold regular meetings once a quarter. The corporations, partnerships, and individuals who compose it — it does not, like the others, consist of corporations alone — represent many different States. Ninety million dollars of face value in its capital-certificates are outstanding, in about 700 hands; the trustees, however, holding and owning a majority in value. The certificate-capital may be increased at any time. The trustees' yearly salary is $25,000 apiece; the president's, $30,000. The business over which this trust presides is primarily oil refining; but its pipe-line transportation has become an enormous ancillary industry. The allied establishments employ 25,000 men and refine not far from 75 per cent. of all the petroleum refined in the country.

* This is the real Whiskey Trust. The title has, however, been applied also to (*a*) the J. M. Atherton Company, mentioned above, (*b*) the Kentucky Whiskey-distillers' Agreement of June 9, 1887, (*c*) the alleged moonshiners' "combine" of North Carolina, and (*d*) the National Protective Association, for agitating against prohibitory legislation.

The trust as embodied in each of these four Herculean forms is a device to unify and vitalize corporations for concurrent action, by partly or wholly separating in each the voting power from the beneficial ownership, concentrating the former for all of the constituent bodies in one and the same bevy of men; namely, the trustees. The strictly legal title to the stock passes to the trustees, acting as if joint tenants, carrying with it, of course, the right to vote.

The looser methods of concert between bodies corporate, taking one another's stock, leasing one another's plants, making contracts between their boards of direction, had involved many sources of weakness. It was not difficult, in States where no law forbade, for one corporation to get in hand a value-majority of another's stock, — the one-half plus one share necessary to elect directors and secure the decisive voice. But directors' authority is limited. They cannot alienate the corporate power, or make contracts which shall bind the corporation to exercise this in disaccord with the stockholders' property-rights. Here is the reason why so many a pooling or other engagement between corporations has proved a rope of sand.

Now the trust proceeds upon the theory that a corporation is a wholly different entity from the corporators who form it. What these do with their stock touches the corporation no more than where they attend church. If they please to lodge it with trustees, no taint attaches to the corporate character. A trust may exist, therefore, and the voting power of all the constituent corporations entirely pass into its hands, without the slightest peculiar or doubtful corporate action by any one of these. Each of the associate legal persons is left perfectly free and independent. No charge of *ultra vires* is maintainable. If such is brought, the reply is ready that only the board of directors can voice the corporation's will, and that no one of these boards has had aught to do with the erection

of the trust. The grand council at the centre can thus vote the stock of all the corporations, and elect, as directors and managers of each, men who will carry out its behests, proceeding without a scrap of corporate agreement, with no legal covenant, with no compact at all of which there is record.

The stockholders, meantime, of course cannot but be agreeable, since the trust-certificates given them for their stock are certain, through the extra efficiency of the centralized control, if for no other reason, to render the change richly lucrative to them. It is, to be sure, not indispensable that all the owners of stock in a corporation should give it up for trust-certificates. It will suffice if a majority be lodged with the central board, although unanimity would doubtless lend strength to the union. For purposes other than voting, the trustees are in appearance mere trustees. They do not officially or visibly represent the corporations,—have, indeed, no necessary contact or communication with them. Yet their power to vote on election day, seating and ousting directors as they list, is enough to establish absolute sway in their hands.

In both the investigations before us, witnesses testified that the corporations in the trusts each maintained its separate organization and carried on its own business. The Standard Oil Trust agreement explicitly insists that all property, real and personal, all assets and all business connected with the trust, must be vested in the several companies, trustees' duties being restricted to the receipt of dividends declared by the corporations, the distribution of them to trust-certificate holders *pro rata*, and the custody and the use at elections of the stock in their charge. Both Sugar Refineries trustees and Standard Oil trustees denied on oath that they as trustees ever did any other business than to receive and distribute dividends and hold and vote the stock of the various corporations which had joined their trusts.

Counsel for the Sugar Trust, being reminded that its deed of agreement ran in the names of its several corporations, insisted that the surrender of stock and the receipt of certificates were none the less purely the acts of individuals, and not in any way whatever of the corporations as such; and that the acts of the board were in like manner individual, "Sugar Refineries Company" being merely a convenient name. Witnesses alleged that each board of directors continued to control its own affairs so fully that it might close its works and still share dividends, and that trustees never assumed to dominate or restrict any corporation's business. H. O. Havemeyer, being sworn, declared the statement that the trustees had anything to do with the management of the sugar-refining business absolutely false; and likewise false the notion that they directed in any way, shape, or manner any one of the corporations whose stock was deposited with them. "There is," he said, "a specific provision in the deed that nothing of the kind should occur, and it has been rigidly observed."

But we must certainly take all this in the light of admissions, also in evidence, that the trustees meet often in more or less formal sessions, that they fall in with each other frequently in their business, that each has knowledge of the others' views continually, and that the full voting power at every stockholders' meeting of all the various corporations is in the hands of this board. So, when it is said in the testimony that not the board, but only the corporations, declare dividends, we must remember that the board hold and vote all the stock, and that all the managing authorities of the corporations are their creatures. Whatever the theory, whatever its status in law, the trust is, in actual fact, a solid, organic, efficiently centralized structure. All the purposes put forward to explain its mission presuppose this. Assertions of its loose and irresponsible nature will beguile

no one who reads the evidence. Further, while such speech may strengthen the trusts' case legally, it weakens it economically and ethically. One would give much to be assured that trusts as trusts cheapen cost. Certainly they might: we believe they do. "No," virtually says the testimony: "they as trusts have no relation whatever to production." Why, then, do they exist? Simply to rig prices? We will not yet judge them out of their own mouth.

The Congressional committee ask special attention to the adroit form of combination just described. It was, they say, "obviously devised for the purpose of relieving trusts and trustees from the charge of any breach of the conspiracy laws of the various States, or of being a combination to regulate or control the price or production of any commodity." Hence, as they further observe, the persistent asseverations of the trusts' witnesses that it is the corporations themselves which own the tangible property and regulate the prices of commodities and the extent of production, just as before the trusts were born; that these corporations remain with their organization intact and distinct, and not in combination with each other; that the *stockholders*, who owned only the *stock*, but by well-settled law had no legal title in the *property* of the corporations,—these entered into the agreements, sold their stock, and accepted trust-certificates in payment; and that the trustees receive and hold only that stock, have no legal title to any of the property of the corporations, and neither buy nor sell anything nor combine with any one to fix prices or regulate production. The committee are of the opinion that all trade syndicates, with aims similar to those of the trusts scrutinized by them, have either adopted this skilful plan of organization or will soon do so, thus evading all trust legislation hitherto proposed in Congress, directed as it has been against schemes "to fix prices or regulate production."

The question whether or not trusts are legal is still *sub judice.*

The principles thus far affirmed by the courts (and with singular harmony) are: 1. A stockholder cannot irrevocably divest himself of the power to vote on his stock, and his agreement to that end does not bind him. The law will not hold him in damages for a breach of it, and equity will enforce his revocation of it. 2. A combination of stockholders to commit their powers of voting to a single hand is not illegal *per se*, but amounts to the giving of so many proxies. 3. Stockholders not in the combination cannot have relief against it unless its object be illegal. 4. If the object be illegal, as, *e.g.*, to confer the power to dictate the vote upon another corporation which could not directly hold stock and cast the vote, the contract is illegal, and any stockholder may enjoin the execution of it. *

The trust being so profitable is, as we have seen, about sure to take in and satisfy all the stockholders, so that it would have nothing to fear from them, even were the purpose of their stock-transfer pronounced illegal. The institution is vulnerable, if at all, only from the side of the State. Two avenues of attack upon it are open, and have already been utilized: the charges, namely, (1) that it usurps the functions of a corporation without being one, and (2) that it contravenes public policy as obstructing trade and enhancing prices.

On the strength of (1), the Louisiana court has recently condemned the Cotton Oil Trust; † but this view

* 19 *Abbott's New Cases*, 448 *seqq.*; *note* on Stock Trusts for the Control of Corporations. We are indebted to this learned discussion for many legal points. On some, the writer's able colleague, Professor C. A. Collin, of the Cornell University School of Law, has also kindly thrown light. In the *Political Science Quarterly* for December, 1888, Professor T. W. Dwight maintains not only the legality of trusts, but also the impossibility of touching them by legislation, State or national. He seems to us to assume the very point at issue; namely, the correctness of the *purpose* for which trusts are here. Will it do to take this for granted, with no canvass of their actual doings, simply from the innocent tenor of the Sugar Refineries deed? On the other side, see General Pryor's impressive argument in the case New York *vs.* North River Sugar Refining Company.

† 1 *Railway and Corporation Law Journal*, 509 *seq.*

of the law, it is believed,* will not be sustained in any of the other States. The case People of the State of New York *vs.* Henry O. Havemeyer *et al.* (Sugar Refineries Company), now pending in the Supreme Court of the State, is, however, also based upon this allegation (1). That against the North River Sugar Refining Company, on the other hand, now arguing before the same court,† turns upon (2). The issue of these litigations will be learned with interest; but, should it be adverse, and followed in other commonwealths, trusts would not yet be laid. The day of old-time competition has set. Law or no law, capitalists will henceforth march mostly in phalanxes.

Such in essential structure is the trust; but there are many other interesting questions concerning it on which our data give information. Before passing to them, however, it may be well to premise a remark.

Scores of business understandings and associations exist whose utility cannot be questioned. The aggregation of capital and the centralization of management are often incalculable benefits. It has been a strong count in the socialists' criticism of the old economic order that under it production is carried on in so wasteful a way; and thoughtful socialists have well shown at how many points, and how extensively at some of them, society might save, were production placed under wise and general supervision. (Competition is by no means always a good.) It is, indeed, never so for its own sake, but only as a means to keep lowest possible cost plus normal profit the law of price. But it may abnormally raise cost and prices both. Different manufacturers start their machinery in ignorance of each other's aims, and crowd the markets with a

* Mickey, in 22 *American Law Review*, 542.

† 4 *Railway and Corporation Law Journal*, 145, 241; 27 *Central Law Journal*, 205.

stock too heavy to be taken off. While the strife is on, prices are low; and, for this felicity, people bless competition. The failures which ensue, the stoppage of work, the decay of mills and machinery, and the rise of prices entailed by all this, often making the average cost of goods for the period far higher than was necessary,— these things few refer, as all should, to competition. The giant style of undertaking is, in part at least, a wholesome movement away from this evil. By it, the field of the industry in question can be mapped out, careful estimates made of the probable demand, and production adapted to this in both place and time, all with a thoroughness impossible so long as competition was unbridled.

In familiar instances, consolidation is confessed by all to have worked well. Who would have the telegraph system of the country or its great railway lines broken again into the pieces they once were? With mutually related activities which do not fuse, pooling, too, is under certain conditions indispensable. An instance is the extraction of crude oil. Some of the fields cover such geological formations that a deep well will drain all the others for a considerable distance. Competition among well-owners here would immensely enhance risks and cost. Arrangements for correlating establishments and regulating competition are not therefore *per se* to be condemned. The only questions that can justly arise in the premises are where and how beneficial co-operation can be introduced without involving fraud and baneful monopoly. These considerations ought to divest us of all prejudice, as, guided by our evidence, we proceed to some more specific queries.

Have the great trusts secured extraordinary gains? Undoubtedly, they have done well. The face value of the Sugar Refineries' total certificates was fixed at a sum far greater than that of the total stock which they replaced. The New York committee say four times as

great, and the way in which counsel fought shy of the point lends color to some such estimate. They, it is true, stood to it that the old stock capitalization had been too low, and that the properties, including good will, patents, and producing capacity, possessed value fully up to the aggregate of certificates. Light is thrown on this assertion by the fact that $595,000 of face value in certificates were assigned to the North River Sugar Refinery, which had just before been purchased for $325,000 in cash. So wide a margin of the new paper over the old certainly seems to imply a wish on the part of the managers to provide for an inordinate income without letting it be too visible. The certificates were apparently proportioned, not to the old getting power, but to the larger one which was in prospect. The certificates, at the time the testimony was offered, ranged in value, so the papers said, between $65 and $85 per share. Call it $75. This would mean that the property had appreciated about 30 per cent. simply by coming under the trust. But there is reason to suppose that the proportion of certificates to stock was much larger in the cases of the other corporations than in that of the North River Company. This, at least, the company's managers believed. Putting various data together, we hazard the conjecture that the property which was placed in trust has been gladdening its owners with not less than 10 per cent. returns. It is not unreasonable to agree with gentlemen in the trust, that the rate might have been far higher but for "all this howl in the papers about trusts," as Mr. H. O. Havemeyer expressed it, and the consequent legislative investigations.

The Cotton Oil Trust, too, uttered certificates much in excess of the aggregate stock on which it was based; but how much neither coaxing nor threats could induce witnesses to state. One of them, being asked whether the stock amounted to a fifth of the certificates, answered, "I think a good deal more." *Q.* "Was it as much as one-

third?" *A.* "I could not say. I know it was more than one-fifth." *Q.* "Between those figures, was it not?" *A.* "It is a matter of a good deal of conjecture." *Q.* "Was it less than a third?" *A.* "I should think not less than a third." "Good will" evidently entered to a considerable extent into this capitalization also. The cotton oil certificates (par value $100) have sold as high as $65, as low as $31. On December 10, 1888, they sold for $54.25, and were rising. A quarterly dividend, the only one reported, was declared in August, 1887. It was 1 per cent. on the face value of the certificate, or 4 per cent. yearly. This, however, left money in the corporation treasuries. The original investment must have brought in late years not less than 12 per cent.

The Whiskey Trust's certificates — so Mr. J. B. Greenhut's testimony seems to mean — footed up two or two and a half times the amount which the plants would have sold at, yet paid regular dividends, after January 1, 1888, of one-half per cent. a month. This would obviously equal 12 or 15 per cent. on the original capital.

The Standard Oil Trust, like its fellows, emitted a greater face value in certificates than had been outstanding in stock. It is to be regretted that Mr. Rockefeller did not defy his counsel, and frankly tell the Congressional committee just how many certificates each party to the trust received and the relation in value of the certificates to the old stock. Was it his motive to keep corporations from knowing each how the others fared in the distribution? They will learn in spite of him. This is no "purely private matter," and the determination so to treat it cannot but work the suspicion that the Trust's winnings have been greater than it would be safe to disclose; but it was admitted that "the amount of certificates issued was in excess of the appraised value of the tangible property of the various corporations,— intangible property, such as good will, patents, trade-marks, etc., being included in the valuation."

The yield of this copious paper proved very generous, averaging in the first six years of the Trust's life 7½ per cent. annually, in addition to about 4 per cent. of annual surplus. Part of this surplus went into the twenty million dollars' worth of new certificates, which were issued early in 1887, to raise the original seventy millions to ninety. Besides, it was thought possible that, after the estimates for 1887 were all in, there would be a still further amount,—equal to 1¼ per cent. during the Trust's whole history,—making the rate earned by the certificate-capital embarked in the adventure from its beginning till the end of 1887 somewhere about 12½ or 13 per cent. The par of the certificates is $100. At the time of the investigation, they were selling at $165. They have been 20 per cent. higher than this, and never lower than $80 or $70. Suppose "water to have been mingled with the oil" to the extent of one-third of the initial certificate-capital, the old stock must have been bringing its possessors 18 or 20 per cent. yearly.

Were the gains in these cases *earned?* Of course, no just inference is to be drawn from their mere largeness. Even if the certificates embodied water, it does not necessarily follow that dividends were paid upon them at the expense of the public. It is conceivable that these were earned as truly as the wages of any laborer in the land. So tremendous are the advantages of massed capital and centralized control, that an establishment possessing them ought to produce at a cost so greatly below what isolated undertakings would incur as to sell more cheaply and get rich at the same time. Claus Spreckels put it well in his words to the Congressional committee, "I can conceive of a trust, if it is not too anxious to make money, being in fact a real benefit to the country in cheapening cost; but, if they are at all selfish, as men mostly are, I can conceive of the trust being made very injurious and detrimental to the interests of the country." "We have

found," so testified the president of the Standard Oil Trust, "that, with all the talent represented in the different departments of this business, we were making progress in all these. In the chemistry, in the making of barrels, in the making of tin cans, and in all the little economies of the business, we have steadily made progress; and, as that progress has been made, we are enabled to push the sale of products more and more, and yet have for ourselves a return. And that has been the history,— steady reduction of cost of all that goes to make up the aggregate cost of the oil, and improvement in the quality of the oils." Impressive testimony was also borne touching the successful efforts of the Standard Oil managers to enlarge their market abroad. Probably no business that ever existed in this or any other country has made such resolute, unremitting, and triumphant mercantile campaigns in lands foreign to its seat as the Standard Oil Trust. The result is one clear proof of the advantage secured by carrying on business in this mammoth way. Isolated refineries would never have won a hundredth part of this foreign trade. And, whatever uneconomic measures the Standard may have been guilty of in extending its field at home, its victory abroad is mainly due to its commendable enterprise.

But it is clear that each of these trusts has a considerable power to fix its buying and its selling prices arbitrarily, and that all or nearly all have to some extent done this. They can compel sales to themselves at the narrowest living profit above cost of production, and can sell at prices higher than would have prevailed under free competition, allowing for such improvements in machinery and methods as might reasonably have been expected, had competition continued.

Advocates of the trusts evidently suppose that no abnormal prices are possible in an industry so long as any sort of competition prevails. Were the competition other

than formal, this would be true; but, in the case of these three trusts, it is formal only. The point deserves special attention. It is maintained that the Standard Oil Trust, for instance, must have been refining oil at a rate as low as could have been afforded under the most favorable competitive *régime*, because there remain active refineries not leagued with it. The argument is thought to be re-enforced by the observation that the number of outside concerns has even increased, perhaps doubled, since the trust went into effect. The inference is unwarranted. It is not necessary, in order that a great business may put a monopoly price upon its goods, that it directly control the entire production. Immediate mastery of a decided majority is practically the mastery of all. So, in the case of steel beams, no new establishment or two will ever break present monopoly rates. To effect that, producing power would have to be doubled.

No one will question that the Copper Syndicate has enormously raised prices above what competition would have made them. Competitively, the metal would be selling for ten cents a pound instead of sixteen. Yet the Syndicate purchases only about three-fifths of the world's entire product. This enables it to dictate prices to consumers; and all the producers not in the Syndicate — like the Anaconda Company of Montana — secure the advantage. The Cotton Bagging agreement nearly doubled prices, though two mills at least stood aloof. The chief witness for this monopoly declared: "I think it gives us absolute control of the bagging market. If we said it should be twenty-five cents a yard to-morrow, it would be twenty-five cents a yard." He seemed to think the rise actually decreed to be a trifle, costing the average cotton-raiser no more than his tobacco bill for a month, and the entire South only the matter of $4,000,000. The outside mills shared the plunder. Precisely the same occurs in the Oatmeal Millers' Association of Canada,— a ring for depressing the price of oats and raising that of meal. It

has closed ten mills, paying them from $300 to $800 each per annum, or a total of $6,312, for inactivity. The Canadian Trust Committee find that the outside mills, numbering about twenty-five, are "of such limited capacity that their influence is not materially felt in the general market; but they avail themselves of whatever advantage the combination gives them to keep up prices."

The principle here is similar to that of rent. Price-fixing by the dearest cost of production is another analogue. We know that the rates to consumers for sugar have not been lowered by the entry of the Hawaiian crop into this country duty free, for the simple reason that not enough thus comes in to supply the market. So the silver dollar continues at gold par, because not sufficient silver dollars or certificates circulate to do the country's required money work. In substantially the same way, unless the small producers, who pretend to compete with the trusts, can so enlarge their capacity as to supply the market,—of course an impossibility,—it will remain, as heretofore, for the trust to say what prices shall be.

When a commodity is turned out under such conditions, cost no longer regulates the price. This is done quite arbitrarily for a time, the seller's whim being perhaps sobered a little by his memory of old competitive rates. Slowly caprice gives way to law; but it is a new law,—that of men's need. Prices go higher and higher till demand, and hence profit, begins to fall off; and they then play about the line of what the market will bear, just as they used to about that of cost. The producer can be more or less exacting, according to the nature of the product. If it is a luxury, the new law may not greatly elevate prices above the old notch. If it is a necessity, he may bleed people to death.

Whether or not any one of these combinations has exercised this power is another question, though equally soluble. Just as we might have expected, almost or quite all of them have done so. We have seen this to be

true of the Milk Exchange, of the Storage and Envelope Companies, and of the Copper and Bagging Syndicates. The Canadian "combines" as well, all but one or two, proceeded to raise prices as soon as formed. Our Sugar Refineries Company did the same. It made sugar considerably dearer, and that at precisely the season of year when the marketing of the Louisiana crop usually renders it extraordinarily cheap. Mr. W. P. Willett finds that the difference between standard raw sugar and standard refined increased from five-eighths of a cent a pound in January, 1888, when the trust got full control of the market, to one and three-sixteenths cents in January and to one and a quarter in February, a change costing the country a round million and over each month it was maintained.* The sugar men admitted an advance of half a cent a pound in their prices, but sought to excuse it by noticing that the London rise had been twice as great. Of course this signifies nothing, as the change abroad could not have affected cost of refining.

Concerning the Cotton Oil Trust the case is less clear. Since its organization in 1884, crude cotton oil has fallen somewhat, while in refined there has been little change. This means, if cost of production has been lessened as alleged, a decided relative rise. On the other hand, cotton seed has advanced in price. How much, therefore, this Trust gets from customers beyond what competition would be taking we will not presume to say. The Whiskey Trust, if we accept the figures placed in evidence, has even cheapened its product to consumers, besides paying for corn a higher price than previously prevailed.

There is no question that the prices of petroleum have fallen since the Standard Trust was launched; and this fact has been held by writers of high character, as well as by the thoughtless, to justify the Trust's existence and do-

* The yearly *per capita* consumption of the United States is 50 lbs. A rise of a cent kept up for a year costs us $25,000,000. The refineries not in the trust get for their sugar just the same prices as those in it.

ings. But it argues nothing, since the prices of commodities in general, including crude oil, of which the Standard produces next to none, have been going down during the same period. To make an argument, it would be necessary to prove the fall greater than it could have been had the business remained in the hands of smaller but powerful separate corporations competing with one another. This cannot be shown.

The Standard refines and it transports. We are assured that it does both at vastly less cost than by previous methods. How little it as yet permits the public to share the benefit appears from the following table, figured from oil statistics submitted to the Congressional committee. The reader will please notice particularly the right-hand column.

YEAR.	Average prices per gallon in cents and decimals of a cent.		Differences in cents and decimals.
	Crude, at wells.	Refined, in N.Y.	
1876	5.988	19.16	13.172
1877	5.684	15.44	9.755
1878	2.761	10.76	7.998
1879	2.098	8.08	5.982
1880	2.24	9.05	6.809
1881	2.029	8.01	5.98
TRUST FORMED JANUARY, 1882.			
1882	1.873	7.39	5.51
1883	2.519	8.02	5.5
1884	1.993	8.15	6.156
1885	2.106	7.93	5.823
1886	1.696	7.07	5.373
1887	1.587	6.72	5.133

One who remembers that the Trust existed informally so early as 1872 will at first incline to credit it with the swift fall in the differences between that and 1882. No. We have computed these differences back to 1861, and also the percentage of decrease or increase in them from year to year. The result is as follows: —

From 1861 to 1872, inclusive,—*i.e.*, before any trust whatever existed,—the net average annual percentage of *decrease* in the price of refining oil and carrying it to tide water was	10.4332
From 1873 to 1881, inclusive, the Trust's infirm and formative period, the figure was	7.3897
From 1882 to 1887, inclusive, the years of its full maturity and vigor, it was	2.2879

Another indication that the power and income of these combinations depend in part upon monopoly is their action in limiting production. Each of them has at one time or another caused establishments to suspend business. Factories have been bought for the purpose of being destroyed or permanently closed and makers of machinery indispensable to the best and cheapest production hired not to sell outside the ring. This policy is unaccountable except upon the theory that the managers dread competition, and are determined so far as possible to prevent it. While in order to dictate prices it is not necessary for them to have driven all opposition from the field, they feel safer the more close the approach to such a result.

November 1, 1887, the Standard Oil authorities made a stipulation with the Producers' Protective Association of the oil fields, by which five million barrels of oil belonging to the Standard were set apart for the benefit of the Association, upon its engaging to curtail the production of crude oil at least 17,500 barrels a day. The paper was actually signed by the Standard Oil *Company* of New York; but the Producers understood, and so testified, that they had made it with the Trust.* If at the end of the year the production proved to have been lessened by the

* A most natural confusion. One witness, being asked Mr. Brewster's connection with the Standard, said: "I think he is vice-president. I do not

aforesaid amount, the Producers were to get all that this oil sold for above sixty-two cents a barrel, storage, fire losses, and insurance being first subtracted. To make good its part of the writing, the Producers' Association entered into a covenant with the Well-drillers' Union, agreeing to pay them the profits over sixty-two cents a barrel on one million barrels of oil and part profits on another million, in return for their promise to desist from drilling and cleaning wells throughout the oil field, thus actually rewarding a very large number of men for lying idle. The Drillers called this "earning" the oil. After the date of this agreement, the average reduction was 25,000 barrels a day. Perhaps to the extent of 7,000 barrels it was due to natural shrinkage, but the rest was in consequence of the shut-down. Here you have a deliberate conspiracy between two formidable organizations to limit the production of crude oil so as to raise its price. In great part it succeeded. They hoped to "bull" pipe-line certificates to $1.50. These went up to 98 cents and $1.00, soon falling back, indeed, to 75 cents, but not to their old level.

This bit of history presents a curious problem. Pipe-liners are at this writing (December 11, 1888) worth 90 cents; and it is quite likely that, when the present stock of oil on hand has been disposed of, the price will, owing to decidedly lessened exuberance of the flow from the wells, continue considerably higher than it was when the contract for closure was concluded. Should this prove to be the case, it will appear that the November manœuvre had the effect of steadying prices, anticipating a rise that was certain to come anyway, and saving many of the producers from ruin. Fault-finders with the course taken will naturally reply that the relief was procured at the expense of oil-consumers. Correct; but, inasmuch as far

know whether of the big thing or the little thing, but some of the things. He is vice-president of something,— that is what is on his door."

the greater part of these live abroad, the operation will have to be declared a net gain to the United States at the expense of foreigners. Whether, therefore, the compact was justifiable or not involves among other questions a very interesting point of international ethics. The French copper deal raises the same problem. Extortionate as they are to American consumers of the metal, the Secrétan contracts, if carried out, bid fair to yield a net increase to this nation's wealth. It is not certain, for we do not yet know what proportion of our copper can be exported under them.

There is further evidence that the tremendous income which holders of Standard Oil certificates have received has not all been in any economic sense earned. The evidence given and placed before the Congressional committee proved to a demonstration that a vast proportion of the Standard Oil profits had originated in favors from transportation companies. All over the country, during many years, until forbidden by the Interstate Commerce Act, common carriers, to secure its custom, granted to the Standard enormous secret rebates, thus not only enabling it to reap phenomenal returns on whatever business it might have done competitively, but to break down competitor after competitor in the struggle, so as to get many local markets entirely to itself, charging whatever prices it liked. On shipments from Pittsburg to Philadelphia, the Standard for a time received the rebate of more than half the freight, no matter who was the shipper. That these preferentials wrought hardship and were a curse all must agree; yet it is not so easy to say what admitted principle of business ethics they traversed. In demanding them, the Standard was doing only what every housekeeper constantly does in dealing with grocers. It used no force to extort them: it simply said, "If you do not transport for us so and so, we will employ others or else build a line of our own." And the carriers on their part

did but allow their lusty customer advantages the same in nature with those that are continually offered to dealers on a large scale. Nothing but the magnitude of these makes them seem outrageous. Does any one object to the secrecy? That complaint may be just; yet few, certainly, are the jobbers who do not often give to heavy buyers prices which are not to be published.

Sometimes, beyond question, carriers were justified, from a business point of view, in making the figures which are complained of. Thus, testimony showed that the Pacific railways cut rates to the Standard as they did because, if this were refused, the oil would go to the Pacific Coast around Cape Horn. The ships bearing it would take along much other freight as well, and would also return laden with freight. It was an object, therefore, for those lines to secure the oil traffic even without money and without price.

But, speaking generally, it is not so. If the readiness with which managers of great transportation companies hastened to their knees before this mercantile Sesostris, as if sovereign of the world, can in most cases be explained without reflections upon their integrity, their reputation for sagacity must suffer. So suppliant a course was at last found to be fatally impolitic for the grantors themselves. In trampling to death his rivals, the Colossus ground in pieces many who had been and might have continued the railways' best supporters. Then, after they had begun slow suicide in the effort to secure the Standard's gracious favor, it took from them, wherever possible, its own business too, transferring it to its new pipe lines.

Our sources show that the witchery of the Standard Oil interest has penetrated even the political world. For some years it influenced, not to say dominated, in at least one great State, the legislature, executive, and courts. Its wiles in that field, described with large detail in the

records of the Congressional committee, render very clear the political menace resident in these stupendous aggregations of wealth. Only the Nation's arm can cope with them. It is refreshing to turn from the account of Pennsylvania's obsequiousness to that decree of the Interstate Commerce Commission which commands that the Louisville & Nashville Railroad Company "do forthwith cease and henceforward abstain from the unjust discrimination [in favor of the Standard Oil Company of Kentucky] found to exist in its charges for the transportation of petroleum oils as between shipments in barrels and in tanks, and from making any higher charges by the 100 pounds for the transportation of the oils in barrels, including the barrels, than it makes or shall make contemporaneously for the transportation of the like weight of the oils in tanks."

Another question, often mooted by the public and made very prominent in the Congressional investigation, concerns the relation of these combinations to our customs duties system. With a word hereon, our review shall close. A restrictive duty can of course lend no life to local monopolies like the Milk Ring and Butchers' Ring, mentioned above. As little does it aid monopolies over goods like cotton-seed oil, which practically we alone produce. American spirits, also, but for the German export bounty on spirits, would command the markets of the world. Though there is a duty on petroleum, it can at present hardly amount to anything, as foreign producers could not yet compete in America with ours, even were importation free. But in Europe and Asia the Standard is even now in dangerous and growing competition with Russian oil-producers. The great Baku wells are at this moment the most prolific on earth. Their supply seems practically limitless. Within the past few years, the Rothschilds and other large capitalists have invested in the

Russian oil-trade; and, by the aid of American inventions and methods for producing, refining, and transporting, they are putting upon the world's markets some three million barrels of refined oil per annum. It is not as yet the equal of American, but is rapidly improving. Here and there in the Old World the Standard has already been forced to cut prices in order to keep its trade. In time, but for our tariff, Muscovite oil might deluge Pennsylvania itself. No approach to such an event is likely, however. The conflict bids fair to issue rather in a world trust in oil.

The Sugar Trust could be crushed by a reduction of duties. This, no doubt, so perfect has the art of refining become abroad, might ruin our weaker refineries, along with the Trust; but at least the Havemeyers and Elder Company and Claus Spreckels would remain, being able in all likelihood to refine sugar as cheaply as it can be done in the world. How long they would be in combining, first with each other and then, if necessary, with European houses, no one can say. The Bagging-makers' monopoly, too, would fall with the tariff, but would with absolute certainty rise to life again by coming to an understanding with the two combinations, at Dundee and Calcutta, which already control the business abroad. The Copper Syndicate is entirely independent of the tariff. There is good prospect, notwithstanding the many lugubrious prophecies, that it will weather its present ills. Its shares, par 500 francs, stood on November 15 at 947.50, and have since only fallen to 895. It will go to pieces, if at all, only because of a little too fierce greed in placing its prices high,—a mistake easily corrected when, as is certain to occur, the next trial is made. It will then be less extortionate, and therefore successful. Whether this undertaking succeeds at once, or only after failure, or not at all, efforts in imitation of it will unquestionably be put forth to secure international concert in every kind of pro-

duction native to different lands, those leading the way which require great capital, and hence naturally fall to a very few establishments each. Steel rails and beams, electrical apparatus, and all forms of mining will be the most apt to take this course. We, at any rate, look for such a development. The industrial march of the time is that way. Obstacles decrease year by year as the means of communication and transportation improve and multiply, and nations are in effect closer to one another to-day than our States were thirty years ago.

It would seem as if the prices of American beef and wheat could never be made dependent upon the tariff. Yet they may be. The original production of the articles, indeed, cannot be brought into few hands so as to be monopolized; but their transportation can be. Beef is even now at the dictation of four firms, and prices may be forced so high that a tariff duty will be needed to prevent importation. If, then, the people should decline thus to protect them, it is at least conceivable that even these businesses might pass each into the hands of an international trust.

It will be noticed that the industries surest to have such an evolution are precisely those among which international competition now prevails. The meaning of the movement would therefore be that the industries previously protected by the government were learning to protect themselves, thus releasing the State from that task. We may consequently expect that the dependence of trusts upon tariffs will steadily decrease. Perhaps it is to disappear altogether. The interest hitherto centred in the tariff question will then go over to that of trusts. Those who suppose that trusts, however organized, whatever their field, are as a rule going to tumble of their own weight, have not, we believe, duly studied the changed conditions under which the most modern industry is carried on.

E. Benj. Andrews.

APPRECIATION OF GOLD.

In the following pages, I attempt to present briefly the practical outcome of certain somewhat technical investigations which I have lately made concerning variations in the value of money.* The main question upon which these inquiries are designed to throw light is, whether and to what extent gold has been appreciated in recent years. The answer turns upon two preliminary discussions. (*a*) What is the meaning of appreciation of gold? (*b*) How is it to be ascertained?

(*a*) There is reason to think that many of the disputes on this subject are due to the use of the same term in different senses. As it has been happily said of metaphysicians misunderstanding each other, one party makes a good stroke at billiards, and thinks he scores off the other, who is all the time playing chess.

We shall get a simple answer to the question, What is meant by a rise or fall in general prices? if we ask the plain man or the woman concerned more with domestic than political economy. For such a one, a rise of prices means that money does not go so far in the way of purchasing the luxuries, conveniences, and necessaries of life. Let us suppose that the average consumption for a whole nation or the largest class of it is capable of being ascertained, and remains pretty constant from year to year (as statistical researches like those of Dr. Engel prove). Then we may define variation in the value of money as the change in the pecuniary value of the na-

* See my "Memorandum on the Methods of ascertaining Variations in the Value of the Monetary Standard" in the *Report of the British Association* for 1887, and a paper on the same subject in the *Journal of the Statistical Society* for June, 1888.

tional consumption per head, the average kit and rations, so to speak.

This is not the only sense in which economists have used our term. There are two other definitions which it is difficult to disentangle, owing to the circumstance that in the instances generally given in the text-books exemplifying what may be called the abstract typical case where the "quantity theory" applies, the denotation is the same for all three conceptions. But, in dealing with concrete facts, very serious confusion may arise from a failing to demarcate these meanings.

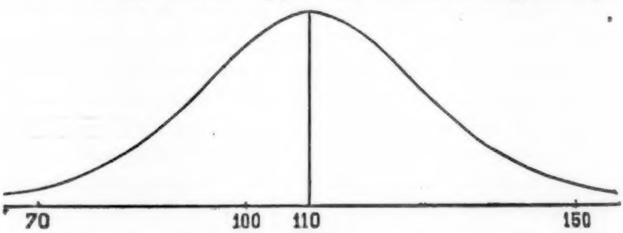
Cournot, the most clear-headed of writers, was perhaps the first who perfectly distinguished the power of purchasing in the sense above indicated from a variation of prices in a more objective sense.* He illustrated the latter species of variation by the analogy of the apparent movement of the stars, due to the yearly motion of the earth round the sun. A better illustration would be the apparent motion of the stars, due to the movement of the solar system in space. For, besides the general drift of the stars in one direction, due to the solar system rushing through space (in an opposite direction), there are "proper disturbances," due to the movement of particular stars or clusters of stars, independent of or superposed on the apparent general movement of the heavenly host.

These astronomical similes render clear in what sense we are to envisage the variation of general prices. From this point of view, we have nothing to do with the importance to the consumer of different articles, any more than we take into account the size of the different stars in determining the relative motion of the solar system. We are to find the average price variation, just as we find the height of the average man without taking

*See chap. ii. of the *Principes* (1838) and the corresponding passage in the later redaction (1863).

account of the weight avoirdupois, or the importance to society of the individual man. We should proceed just as anthropometers do in ascertaining the mean stature of a nation. In that case, we need not have *a priori* any theory about heredity or other cause why one nation or class is taller than another. What is ascertained is that, say, the mean height of Englishmen is sixty-seven and a half inches, of Italians sixty-two. So here we need not import into the facts any monetary theory. What is to be demonstrated by the statistician is whether, as a mere fact, prices on an average have risen or fallen.

The only supposition which the inquiry postulates is that the particular prices should comport themselves in much the same way in respect to their "proper disturbances" that stars or human heights do; that is to say, the whole set of statistics should present a general resemblance to the annexed type. The annexed diagram rep-



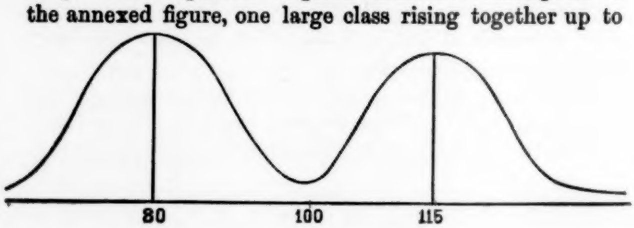
resents in its first intention the various heights of the men in a nation, grouped about their mean value. The abscissa represents height in inches, the ordinate the corresponding number of men enjoying that height. The reader must imagine the proper figures to be filled in. The numerals in the diagram relate to some secondary applications of the figure.

Suppose we wanted to ascertain the mean increase per cent. in the weight of men between two ages. If we found an individual to have increased in weight during that

period of life from ten stone to eleven stone, we might say he had increased ten per cent., from 100 to 110. Let us register the percentage increase of a numerous assortment of men. Then the diagram might represent the sort of statistics thus obtained. The ratio of increase most frequent would be 110. Many, however, would not have increased at all; some, as happens at an advanced age, would have actually declined in bulk; others would have put on flesh in extraordinary quantities. The mean percentage growth would be 110.

The same figure may be used to represent the dispersion of prices. Suppose beef has risen from 1*s.* to 1*s.* 3*d.*,—that is, 25 per cent.: then we may designate that change as a rise from 100 to 125. Similarly, we may suppose all the prices to start at 100, and to gain or lose a percentage. Conceive, then, that all the prices are, so to speak, placed initially at the point on the abscissa marked 100. In the interval of time under consideration there will occur a dispersion of percentages such as the figure represents. A large proportion of prices will have risen from 100 to 110; supposing, as in the case examined by Jevons, that there was a mean rise of 110. A smaller number may remain unchanged at 100. A smaller number will sink to 80, a number still smaller to 70. So, also, it is only in rare instances that prices will rise very high above the mean variation 110, say to 140 and higher.

Well, then, it must be postulated for the present purpose that this sort of arrangement is fulfilled by our statistics of prices approximately, at least, and hypothetically. The dispersion of prices must not correspond to the annexed figure, one large class rising together up to



115, while another and compact cluster falls to 80. In this case, the mean value — it may be 97½ — does not, as in the former case, correspond to anything worth measuring. We may say that one category has risen to 115, another fallen to 80, but we cannot usefully measure in the sense just explained the *general* variation of prices.

In this abnormal case there becomes visible a *third* definition of appreciation (and its converse), which, under ordinary circumstances, is apt to be undistinguishable. It is thus that during the eclipse of the sun we are able to distinguish bodies in its proximity which, ordinarily, are lost in its effulgence.

To fix the ideas, let us leave out of sight the sale of services, and let us employ the useful conception lately introduced by Sir Rawson Rawson of "an average ton of commodity," — all kinds of commodities, whether ready for consumption or of the nature of tools and materials. Suppose, then, the average ton of commodity sold per year consists of a hundred weight of coals, a hundred weight of iron, so many pounds of indigo, and it may be ounces or grains of nutmeg. Now, if the prices for one moiety of this set go up *en bloc* and for the other go down, we are agreed that it is not significant to speak of a mean price. The statistics of price *per se* and in the absence of some hypothesis do not present any unique *type*. For instance, if we did not know but what all the prices related to credit transactions, then I think the mean of two such discrete clusters would have no significance, would be what the Germans call an *Unding*. But let it be granted that the ton of mixed commodity is moved by metallic currency, then we may regard as measurable the increase or decrease in the quantity of gold which goes to a ton of commodity moved by gold, which, in the phrase of Petty, is required to "drive" that portion of trade. Thus, then, we reach the third definition of variation of prices,— namely, variation

in the quantity of metallic currency relative to the work it has to do; that is, to the volume of transactions effected by payments in hard cash.

This conception will be found implicit in much that is written on the subject. For instance, Mr. Forsell and others speak of attaching importance to the respective price returns, when combining them to form a measure of the mean variation, according to the degree in which some transactions "absorb" more currency than others. I am fortunate in being able to complete the definition of this conception by quoting from one who never fails to impart clearness to any subject which he discusses,— Professor H. S. Foxwell. Writing to me with reference to the work of the committee appointed by the British Association to consider methods of ascertaining variations in the value of money, he thus expresses himself: —

> I consider that the degree in which a commodity is the subject of speculative dealing would have to be taken account of in the construction of a tabular standard. . . . I presume the intention in allowing for the bulk of a commodity and the number of sales, or, in other words, for the *amount of sales* in a commodity, is to measure the extent to which the commodity figures as constituting a demand for money. . . . My point is that, in the case of a speculative commodity, variation in the amount of sales does not necessarily mean any variation, certainly not any corresponding variation in the demand for money.

Two shades of the conception here defined may be distinguished according as the area over which we estimate the amount of gold relative to its work extends over the whole plexus of countries in monetary communication — the *Münzgebiet*, as the Germans say — or is limited by a frontier permeable to the precious metal. The former is, I think, the more appropriate conception. The variation in the amount of gold thus defined corresponds to the ratio in which the quantity of precious metals would

have to be increased in order to restore the level of prices to a *statu quo*, so far as it may be the duty of government to attempt such restoration; that is, so far as the disturbance has been due to the deficiency of the currency in relation to the work which it has to do. But the variation in the quantity of gold in relation to its work for any particular country, for any one creek of the monetary lake-system, does not, I think, equally form the answer to any conceivably practical question. This latter conception has hardly, I think, a substantive reality, though it may have a certain use as an adjunct to our *second* method of ascertaining appreciation or depreciation. It is thus that I understand Mr. Giffen in his classical paper on Depreciation to make use of the ratio between the volume of transactions and the quantity of gold in England.* The *quæsitum* in Mr. Giffen's investigation I take to be a mean variation in some such sense as our *second*. He determines the depreciation in this sense: First, directly by actually taking the average variation of a large number of miscellaneous prices. Then, by way of verification or collateral proof for that *quæsitum*, he estimates the change in the ratio between the metallic currency in England and the work it has to do. I doubt if he would have concerned himself about his second operation if the first had proved utterly nugatory owing to the statistical abnormality, the two-headed development of the price-curve which I have noticed above.

To sum up the results of this initial discussion: We have seen that there are at least three different definitions of appreciation and its converse, distinct in idea and connotation, though apt to be coincident in fact. The first may be described as subjective, being grounded on the relation of prices to certain human wants, such as the requirements of the consumer. The second *quæsitum* is a mere average,— a type which gathers the statistical phenomena into an ideal unity without reference to

* *Essays in Finance*, Series I.

any special use or particular hypothesis. The chief use contemplated is the general purposes of scientific inquiry, the sort of use to which the analogous measurement of mean stature is put by statisticians, when they conclude, like Mr. Galton, by a comparison of averages, that certain trades or localities are unfavorable to the development of the human body. Thirdly, we may regard price variation as the expression and measure of a real objective thing; namely, the change in the quantity of metallic currency per ton (or other unit) of commodity paid for in hard cash. If we call the third definition as distinguished from the first objective, we may regard the second as semi-objective or typical.

(*b*) We have next to consider how to ascertain appreciation. This has been already in part effected. For, in defining what it is we seek, we have indicated where to look for it. "The beginning is half the whole" in this sense. Nor are we concerned with the whole investigation here. It is proposed to point out only the general line or rather lines of inquiry, not the tortuous technicalities of each path. Speaking generally, then, we may say that our problem is to combine price-variations given as percentages into a mean or so-called index number, and that the rules required are mainly of two kinds,—prescribing what prices, if any, are to be altogether omitted from the combination, and what relative importance is to be assigned to each of those which are to enter into the average. The rules on these points differ according to the different definitions of the *quæsitum*.

(1) For the first sort of average, the subjective mean above described, we are to take account only of commodities adapted for immediate consumption, omitting goods which are useful only as means, not ends. Thus we shall include Anchovies, Beef, etc., but not Alkali, etc. The importance assigned to each price will be pro-

portioned to the amount consumed of the corresponding article. Thus the required combination will be of the following type,—

$$\frac{\left[\begin{matrix}\text{Anchovies, quan-}\\ \text{tity consumed}\\ \text{per annum,}\end{matrix}\right\} \times \left\{\begin{matrix}\text{Present}\\ \text{price of}\\ \text{anchovies,}\end{matrix}\right] + \left[\begin{matrix}\text{Beef, quantity}\\ \text{consumed per}\\ \text{annum,}\end{matrix}\right\} \times \left\{\begin{matrix}\text{Present}\\ \text{price of}\\ \text{beef,}\end{matrix}\right] + \&c.}{\left[\begin{matrix}\text{Anchovies, quan-}\\ \text{tity consumed}\\ \text{per annum,}\end{matrix}\right\} \times \left\{\begin{matrix}\text{Original}\\ \text{price of}\\ \text{anchovies,}\end{matrix}\right] + \left[\begin{matrix}\text{Beef, quantity}\\ \text{consumed per}\\ \text{annum,}\end{matrix}\right\} \times \left\{\begin{matrix}\text{Original}\\ \text{price of}\\ \text{beef,}\end{matrix}\right] + \&c.}$$

where the original price of Beef designates the price at that initial epoch between which and the present time a comparison is indicated. In a first approximation, it may be assumed that the quantities remain constant from year to year, as, in fact, is pretty nearly true. We are not here concerned with the technical devices by which greater precision is attainable. Suffice it to say that any error committed in assigning a wrong weight to one price, say Anchovies, is apt to be compensated by the independent fortuitous error incurred in treating another article, it may be Beef.

(2) For the purpose of a mere average or type, we are to take account of all manner of goods, and we are not concerned with the quantity of each commodity. We have for this purpose only to ascertain the ratios or percentages, such as

$$\frac{\text{Present Price of Anchovies}}{\text{Original Price of Anchovies}}; \quad \frac{\text{Present Price of Alkali}}{\text{Original Price of Alkali}}; \quad \frac{\text{Present Price of Beef}}{\text{Original Price of Beef}} \;\&c.,$$

and then to take a simple or unweighted mean of these ratios: that is a mode of combination which is symmetrical with respect to all these elements, not assigning more weight or importance to one price than another. The common arithmetical mean is the simplest and most familiar form of this sort of combination. But for certain technical reasons, which it is beyond the scope of this paper to enter into, the arithmetical mean is not so suited

to the statistics of prices as the geometric mean employed by Jevons, or a certain other species of mean commonly called the median. But, whatever genus of average is adopted, the simple or *unweighted* species thereof is appropriate to the aspect of the problem now under consideration.

This rule will excite the mirth of some. What, they will exclaim, assign the same importance to pepper and nutmeg as cotton and iron! Yes, I reply, for the present purpose, just as in ascertaining the (variation of the) rainfall of a district by an examination of several rain-gauges placed in a variety of suitable spots, I would not, in combining their results, assign more weight to the larger receptacles. The size of a vessel is, with reference to its use as a cistern, an all-important circumstance, but for the purpose of a rain-gauge comparatively indifferent. The reason of the objector's surprise is that he has never cleared his ideas as to what it is he seeks. He wants a cistern, while I am arranging for a rain-gauge. I make a break at billiards, and he calls out, "Check!"

However, it may be admitted that, though there is no peculiar propriety in using a *weighted* mean for the present purpose, at the same time there is not much harm in doing so. If a true average (in the sense above explained) exists, then it is not likely that much difference in the result will be produced by "weighting" each of our price variations according to the quantities of the corresponding article.* Moreover, in this way we may best attain what may seem to be the object of some,— a sort of compromise mode of measurement, or jack-of-all-trades index number, adapted as well as may be to the fulfilment of purposes which, in a more perfect division of labor, should be pursued separately. For these reasons there is not much objection to modifying our second

* On this point, see my "Memorandum on the Accuracy of Index Numbers," prepared for the British Association, 1888.

formula by taking account of quantities.* Then each ratio of the form

$$\frac{\text{Present Price of Anchovies}}{\text{Original Price of Anchovies}}; \quad \frac{\text{Present Price of Alkali}}{\text{Original Price of Alkali}}, \text{\&c.},$$

is to be weighted by some such factor as,—

$$\left\{\begin{matrix}\text{Total Value of Anchovies} \\ \text{consumed per annum at} \\ \text{Original Price,}\end{matrix}\right\} \quad \left\{\begin{matrix}\text{Total Value of Alkali} \\ \text{consumed per annum} \\ \text{at Original Price,}\end{matrix}\right\} \text{\&c.}$$

If we use the most familiar mode of combination of the sort called arithmetical, we shall thus obtain a formula similar to our first, except that here all manner of articles enter in,— Alkali as well as Anchovies.

(3) The same formula will serve as a first approximation to the third form of index number. In other words, if the composite "average ton" above described consists of, say, two hundred-weight of coal, one hundred-weight of cotton, one pound, or .0005 hundred-weight, of *pepper*, then the index number is of the form,—

$$\frac{\left[2 \times \left\{\begin{matrix}\text{Present Price} \\ \text{of Coal,}\end{matrix}\right.\right] + \left[1 \times \left\{\begin{matrix}\text{Present Price} \\ \text{of Cotton,}\end{matrix}\right.\right] + \text{\&c.} + \left[.0005 \times \left\{\begin{matrix}\text{Present Price} \\ \text{of Pepper.}\end{matrix}\right.\right]}{\left[2 \times \left\{\begin{matrix}\text{Original Price} \\ \text{of Coal,}\end{matrix}\right.\right] + \left[1 \times \left\{\begin{matrix}\text{Original Price} \\ \text{of Cotton,}\end{matrix}\right.\right] + \text{\&c.} + \left[.0005 \times \left\{\begin{matrix}\text{Original Price} \\ \text{of Pepper.}\end{matrix}\right.\right]}$$

that is, supposing that the amount of currency required to "drive" (in Petty's phrase) a pound of coal or cotton is the same as the amount required by a pound of pepper, and supposing also a number of "other things" at the two epochs compared to remain the same.

For a second approximation, we ought to take account that the "demand for money" in the sense defined by the extract above cited † is not, as pointed out by Pro-

* Compare the Second Report (drawn up by Mr. Giffen) of the Committee appointed by the British Association to ascertain the best method of measuring variations in the value of the monetary standard. *Report of British Association*, 1888.

† See p. 158.

fessor Foxwell, simply proportional to the "amount of sales" in the commodity. Thus it is proper to affect each of the elements in the last written formula with a factor or coefficient corresponding to the demand on the currency as varying with the *quality* of different articles. Thus *cotton*, owing to the speculative character of transactions in it, may require per pound of commodity less currency to drive the trade than, say, *pepper*. No doubt such corrections would be individually very inexact. But, owing to the compensation of errors which I have already alluded to as coming into play in such formulæ, the total result would have great claim to accuracy but for an imperfection of which the full importance has not, I think, been recognized.

In our first and second approximations, we have taken for granted that "other things" remain the same at the compared epochs: in particular, the proportion of credit to hard cash transactions and the rapidity of currency. Now, in so far as these coefficients vary for different articles, these variations might be ignored on the principle of compensation. And it is possible also to get rid of what are called the "periodical" ups and downs of credit by taking an average over a long period. We might, for instance, compare the average prices for the period 1875–85 with those for 1865–75. But we cannot thus get rid of the *secular* variation in the relation between credit and cash transactions, of changes in what has been happily called the organization of credit. The same remark applies to the progressive variations in the rapidity of currency, which there is reason to believe are taking place. Moreover, these changes affecting industry as *a whole* are not subject to that law of compensation which has enabled us to wink at errors in the *parts* of our computation. In fact, in virtue of these secular changes, our result is affected by factors which, in the present state of science, I venture to regard as purely conjectural.

I speak of the attempt to assign in the *a priori* method described the relation between gold and the work of transfer it has to do for the whole system of countries in monetary combination. No doubt for a particular country we may, with more confidence, assign a value to the unknown factors. Thus Mr. Giffen postulated that the relation of credit to cash transactions in the United Kingdom had not much altered in the period under his review. His assumption has been doubted by high authorities;* but, at any rate, it is of a sort which could not with safety be extended to the *Münzgebiet.*

I conclude therefore that the method which leads to our *quæsitum* is completely blocked by statistical difficulties. I mean the direct path proper to this scope. For, of course, if a true average in our second sense, a typical variation of prices is, and is ascertainable, we may deduce from the reasoning proper to the *second* method a conclusion admissible of the third *quæsitum.* If it is true that all prices on an average have decreased by, say, ten per cent., then it is sure to be true that the price of an "average ton" has decreased by about the same percentage. Accordingly, it may easily be deduced if we mentally abstract from the great volume of transactions that sphere thereof which is permeated by pure gold. It will be approximately true that to every composite ton within that sphere there goes ten per cent. less gold now than originally.

(*c*) After this preliminary discussion, we are now at length in a position to approach the main question, whether in recent times gold has been appreciated. From what has been said, the reader will be prepared to find the answer articulated, diversified according to the shades of meaning which may be attached to the question. In the

* As by Mr. J. B. Martin, *Journal of the Institute of Bankers.*

subjective sense above defined, I think it is reasonably certain that there is at present — as compared, say, with 1867–77, Mr. Sauerbeck's initial period — a considerable appreciation; though it must be remembered that the level of prices which affects consumers is that of retail dealings, concerning which we have not accurate information. Much the same, I imagine, is true of the other civilized countries. So much will be admitted by many who yet deny that there has been a fall of prices in a more objective sense. The interest of the controversy concentrates about our second conception. For, as it has been shown, the third *quæsitum* does not lead in practice to any distinct method of investigation. On this question are we to side with Messrs. Forsell, Laughlin,* and Wells,† or with the bimetallists?

I fear that I cannot give an unqualified assent to the advocates on either of the sides. On the one hand, many of the arguments used to prove that there has not been a fall in general prices appear to me altogether wide of the mark. To assert with Mr. Laughlin ‡ and others that, in order to prove a general fall, you must prove a fall in every article, is wholly to ignore the character of the investigation. The phenomenon under examination is of the nature of what Mill called a "residual phenomenon," like the difference in the mean height of the barometer between two hours of the day, the so-called "diurnal variation." On an average of many days there is found to be a fall, but it is not necessary nor true that every day, experience should present that phenomenon. The theory of probabilities is satisfied with a majority of days. The figure at p. 156 will put the matter in a clear light. It will be seen there that there is a mean rise of ten per cent.; though many items not only do not rise, but fall.

* *Quarterly Journal of Economics*, April, 1887.

† *Contemporary Review*, 1887.

‡ *Quarterly Journal of Economics*. *Cf.* Mr. David Wells, *Contemporary Review*, November, 1887, p. 63.

The slightest acquaintance with the theory of errors of observation will show the justice of this conception.

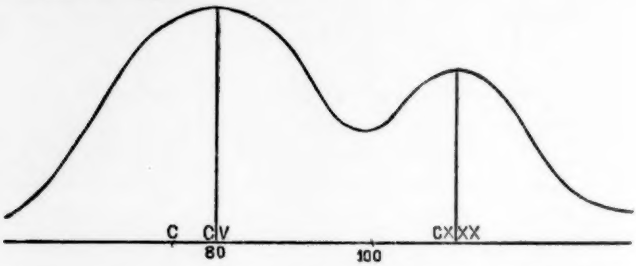
The same illustration disposes of another objection. It seems to be taken for granted * that, when we can show a reason why each price should have varied in the direction actually observed, we are thereby debarred from inferring a general displacement due, in the phrase of Mill, to "causes that operate on all goods whatever." † But this assumption is quite erroneous. The meteorologist may be able to assign the reason why between morning and noon each particular day there has been a rise or fall of the barometer. But the mathematician is not thereby precluded from extricating by the theory of probabilities a mean variation between those hours.

At the same time, while so far siding with the bimetallist faction, I cannot agree that reasonings like those of Mr. David Wells in the *Contemporary* of October and November, 1887, are *nihil ad rem*. They go to prove that the variation of prices may be disposed in two distinct categories (like those above represented); namely, (1) where the cost of transport or other expenses of production have diminished, and (2) where this agency has not operated. The argument, properly interpreted, is good as to quality. The only question is whether it is efficacious as to quantity. This is a question of degree, for deciding which there are required the appropriate conceptions of the calculus of probabilities, informed by extensive practical knowledge. I cannot make any claim to the latter part of the condition. But, as a mere opinion, and by way of showing what sort of conclusion is attainable, I submit that the state of facts is probably

* *E.g.*, Mr. Wells, in his articles in the *Contemporary Review*, October and November, 1887.

† The reader will please observe the happy generality of Mill's language. Whether the common cause is on the side of gold or goods is not here our concern.

capable of being represented in some such form as the annexed diagram.



The main peak corresponds to a fairly general fall of twenty per cent. There are, however, certain categories of prices which exhibit no fall, but rather a rise; perhaps capable of being grouped into a distinguishable, but not altogether separate, type. Under such circumstances, it is a nice question for practical judgment whether we can at least hypothetically posit a unique type. That there are exceptional outlying categories, as the figure represents, is not a decisive objection to this hypothesis. For, if statisticians were extreme to mark such irregularities, it would be impossible to find anywhere *in rerum natura* types of the kind which Quetelet has made familiar. Take the ratio of male to female births, the phenomenon in concrete statistics which best complies with the ideal rules of the calculus of probabilities. Yet the distribution of these statistics, nearly viewed, would probably present a form somewhat like the above. Let the percentage of male over female births in any district be represented by the distance along the abscissa from the point *c*, corresponding to 100 female births, while the ordinates represent the number of districts presenting each ratio. Then the most frequent ratio would correspond to a peak about 104 or 105, marked as *cv* (100 being now indicated by *c*). But there might be a little

peak higher up the scale,— rather smaller than in the figure,— corresponding to the category of *still*-born children, in which the proportion of males to females is far above 104 : 100, say 130 : 100 (corresponding to the point marked cxxx). Yet this irregularity does not prohibit us from speaking of the mean ratio of male to female births as 104 : 100 in England. Similarly, I am prepared to accept the statement that there has been an average decline of prices by so much per cent. Or, translating this statement into other terms (according to the reasoning above explained), I think it quite likely that throughout the civilized world there has been a decrease of money in relation to the work which it has to perform.

As to the cause of this phenomenon, I do not pretend to an important opinion. If, in the eternal race between gold and goods, gold seems at present to have fallen behind, I leave it to nicer observers to determine whether it is the gold which has been curbed or the goods which have been spurred, or whether and in what degree both agencies may have operated. The remedy of the disturbance which has occurred is a subject still further *ultra crepidam*.

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RAILROAD BUSINESS UNDER THE INTER-STATE COMMERCE ACT.

NATIONAL railroad control has developed with startling rapidity. Two years ago, it was a question in what form the Interstate Commerce Law would pass. One year ago, people were still asking what it meant. To-day, we may treat it as an accomplished fact, and enquire, What are its actual effects on business? It is, of course, too early to expect a definite answer to this last question; but it is not too early to attempt a provisional one.

The primary intent of the law was to abolish the system of special bargains in dealings between railroads and shippers, and to substitute in its place a system of tariff rates. For a time, it was thought that this had been successfully accomplished. Even now the failure is by no means so complete as some people think. In most parts of the country, the provisions against personal discrimination are tolerably well obeyed. When matters are at their worst, there is evasion rather than direct violation. The most important instances are often unknown to any but the local agents, and not explicitly countenanced by their superiors. Of open defiance of the provisions against personal discrimination there is surprisingly little.*

The attempt to check local discrimination has also been more successful than was generally anticipated. Comparatively few of the railroad tariffs now conflict with the "short-haul" principle, and charge more for a part of a route than for the whole. The effort to evade this portion of the law is chiefly seen in the adoption of forms of clas-

* Existing violations are often quite as much the fault of the shippers as of the railroads. The Commission has more than once recommended that shippers be held responsible for such wilful violation by false description of goods. *In re Underbilling*, 1 Interstate Commerce, 633; Second Annual Report, p. 69.

sification which favor through traffic rather than local. Through traffic is mostly carried in full carloads; local traffic, in parcels. It is obvious that a tariff of rates which charges carloads at relatively low figures and parcels at relatively high ones will continue some of the old discrimination in favor of trade centres. In form at least, such a discrimination does not violate the letter of the law. Whether it is admissible or not under present circumstances is a matter for the Commission to decide. Of all the questions of practice involved in the construction of the act, this is perhaps the most important, and is certainly the most difficult. It may be some months before anything like a general solution is attempted.

The reaction against disproportionately high local charges and the movement towards conformity with the short-haul principle had already begun some time before the passage of the act; and it had in many districts gone so far that it was easy to do what was left in order to meet the requirements of the law. In the South and on the Transcontinental lines, the process was slower. The Louisville & Nashville decision left it open to railroads to delay the readjustment of their tariffs in cases of uncontrolled competition. Through shipments by Southern lines were more or less directly subject to such competition from water routes, while the Transcontinental lines were able to plead a similar dependence on the action of the Canadian Pacific. In the year 1887, little was accomplished in applying the short-haul principle in either of the districts named. In 1888 there has been much more progress in this respect, especially on the Transcontinental lines; nor can the accomplishment of the same result in the South be long delayed.

It was much easier for the strong roads to obey the short-haul clause than for the weak ones. There were several reasons for this. In the first place, the strong roads had, for the most part, pursued a far-sighted policy in developing their local traffic. They had of their own free

will made reductions which brought their tariffs into substantial conformity with the provisions of the act. On the other hand, the weak roads had been subject to a double difficulty. To secure any through traffic, they had been forced to make their through rates as low as those of their stronger competitors, and sometimes even lower, when the shipper required special inducements to send his goods by the less known or less responsible route. Meantime, the high operating expenses of these roads had made their local traffic more costly to handle. The difficulty felt by their managers in making both ends meet rendered it impossible to reduce such local rates, and thus sacrifice present revenue for the sake of future gain in the growth of the district. When the Interstate Commerce Law went into effect, these roads found themselves somewhat suddenly forced to equalize charges which had hitherto been arranged on quite different principles.* They could not raise their through rates to any great extent, without abandoning all effort to share in the competitive traffic. They were thus forced to make considerable reductions in their whole scale of local rates.

If we examine the reports of the various trunk-lines, we shall find abundant indications of these effects. The strong roads, as a rule, show little change in their general schedule of charges, and an increase in the volume of through traffic even more conspicuous than that in local business. On the other hand, the weaker roads show decided reductions in average local rates, combined with conspicuous gains in volume of local business and relative, if not absolute, loss of through business. The Chesapeake & Ohio, for instance, showed a direct shrinkage of

* "It is quite clear that the more powerful corporations of the country, controlling the largest traffic and operating on the chief lines of trade through the most thickly settled districts, can conform to the statutory rule with much more ease and much less apparent danger of loss of income than can the weaker lines, whose business is comparatively light, and perhaps admits of no dividends, and the pressure of whose fixed charges imposes a constant struggle to avoid bankruptcy." First Annual Report of the Interstate Commerce Commission, p. 17.

7½ per cent. in gross earnings from through freight, an increase in local freight earnings which more than counterbalanced it; and yet, in spite of this, the average freight receipts per ton-mile fell from 0.541 cents in 1886 to 0.536 cents in 1887.*

In almost all these cases there was a decided gain in gross earnings. As these gains were reported from week to week in the summer months of 1887, they produced an impression of great apparent prosperity, and stimulated the mania for new railroad construction. The managers desired to build new lines because they believed that there was traffic enough to keep them fully occupied. The investors were ready to furnish the money because the figures of traffic seemed to indicate that there was chance for a profitable investment. No less than 12,688 miles † were built in the year 1887 alone.

But matters were really not in so good a state as was supposed. Figures of net earnings did not show the substantial gain which was expected. Even where gross receipts had increased decidedly, the change in net earnings was smaller. Where gross receipts had remained stationary, net earnings showed a positive falling off. The general result for the year 1887, as given in Poor's *Manual* for 1888, is as follows: —

	1886.	1887.	Change per cent.
Gross earnings	$829,940,836.00	$940,150,702.00	+13
" " per mile	6,570.00	6,861.00	+ 4½
" " per train-mile . . .	1.443	1.445	0
Net earnings	300,603,564.00	334,989,119.00	+11
" " per mile	2,376.00	2,444.00	+ 3[illegible]
" " per train-mile . .	0.522	0.514	− 1½

* "On both classes of roads there was a tendency toward lower local rates and higher through rates; but on the weak roads the former result was most obvious, and on the stronger roads the latter. In comparing the annual reports for 1887 with those for 1886, we find on the weak roads lower average ton-mile rates, large gains on the local traffic and actual reduction in through freight earnings; while on the strong roads we find, on the whole, higher ton-mile rates and considerable gains on through freight. So marked is this tendency in some cases, that the Lake Shore, for instance, shows at once a higher average ton-mile rate and longer average haul." *Railroad Gazette*, June 8, 1888.

† Second Annual Report of Interstate Commerce Commission, p. 1. Poor's *Manual* places the figure somewhat higher.

This by no means shows the full effect of the change; for many of these figures cover months previous to the time when the law went into operation, and none of them are late enough to reflect the full result of the railroad expansion of 1887. It should also be remembered that the year 1885-86, with which these figures are compared, was not a particularly successful one in railroad business. It is a most significant fact that under these circumstances an increase of 4½ per cent. in gross earnings per mile was accompanied by a positive loss of 1½ per cent. in net earnings per train-mile.

The failure to increase net earnings shows that the conditions of operation in 1887 and 1888 were in some respects less favorable than in the previous years; or, to put it more accurately, that operating expenses increased relatively faster than gross earnings. In some cases, this increase of operating expenses was apparent rather than real. In analyzing the reports of the Pennsylvania Company or the New York Central, we find that the apparent increase of expenses in 1887 was due to unusual payments for repairs, which were somewhat arbitrarily charged upon the traffic of that year. But in most cases we find an increase in the amounts paid for transportation charges. To some extent, this is due to the larger proportionate amount of local traffic under the operation of the Interstate Commerce Act. More commonly, it indicates an increase of traffic by reductions in charge that have been carried beyond the point which good railroad economy allows. Especially is this the case on several of the great Western systems, like the St. Paul, the Burlington, or the Atchison.

The effect of the increased traffic is to produce a special demand for railroad labor. In the majority of detailed railroad reports, we find some allusion to increased wages as an important element in expense. When a railroad company paid higher wages, and at the same time did its

business at lower rates, its profits were cut down at both ends. If, on the other hand, it attempted to avoid the payment of higher wages, it was liable to a strike at a time when it could least afford it. The labor organizations were conscious that they had the railroads of the country at a disadvantage, and they used their power with considerable effect. Even when a road, like the Burlington, resisted their demands, and gained a victory, the result was so dearly purchased as to make other companies hesitate about following such an example; and this state of affairs, while it increased expenses, tended on the whole to lessen the efficiency of discipline. It can hardly be a matter of mere chance that such an unusual number of railroad accidents have occurred within two years past. With the quick expansion of the railroad system, it has been necessary to employ new men. In any unusual strain upon the operating department, the evil effects of this condition make themselves felt. If a road is in financial difficulties, or if its relations with its workmen are in any wise questionable, the chance of accident is vastly increased. We must not, of course, consider the recent frequency of railroad accidents as a result of the Interstate Commerce Law, especially since some of the worst of them have happened before the law went into effect; but they are the symptoms of a condition of affairs under which the application of the law becomes more difficult.

As the new railroad mileage was brought into operation, all these evil effects were intensified. It often happened that a line which was unable to secure a profitable business attempted to make its neighbor's business unprofitable, and succeeded only too well. In this respect, the effects of the Interstate Commerce Act were decidedly bad. If one road already enjoyed a large local business, and a competing road was built which had little or none, the latter was in by far the stronger fighting position.

The Interstate Commerce Law, by compelling the reduction of the local rates to the standard of through rates, handicapped the sounder road in any contest which might arise; while by the prohibition of pooling it ensured the recurrence of such contests. From this evil effect of the law, the Interstate Commerce Commission gave no relief. Under the language of the act, it was perhaps impossible to expect any such help. Yet the manner in which they have treated the subject has been a serious disappointment to many students of the railroad question. While admitting the difficulties of the situation, they speak as follows of their own authority: "The act has doubtless conferred upon the Commission a greater power to protect localities against the carriers than it has to protect the carriers against themselves or against each other. It was probably thought in Congress that, were the liberty of action left to the carriers, they would not needlessly rush to destruction. The assumption may not prove to be well founded; but nothing seems plainer than that, under the law as it stands, the protection of carriers against destructive rivalry and rates that lead directly to bankruptcy must be found chiefly in prudent management, in the cultivation of reasonable relations among themselves, in mutual forbearance and the application of a sense of justice to their mutual dealings and in their rivalries." *

This statement of the case is not quite fair. The practical difficulty is that the law, by the clause prohibiting pools, has rendered it nearly impossible for the railroads to cultivate such reasonable relations with one another; or, rather, it has made it possible for the most reckless manager among several rival companies to dictate the policy of them all. The Commission may not have the technical authority to protect investors' interests under these circumstances; but, in a large number of their pre-

* 2 Interstate Commerce Report, pp. 266, 267.

vious decisions, they have far exceeded the limits of the technical authority which the act was intended to confer upon them. The Commission has had an unexpected power, because it showed itself a responsible protector for a variety of interests. If it shrinks from exercising that office in behalf of the investor, it will have a most damaging effect upon its ultimate authority and influence. The Interstate Commerce Law, as the Commission says, in its first annual report to Congress, was not intended to destroy, but to conserve and protect. If the law is found to be really destructive, it must produce a reaction which, sooner or later, will seriously impair its efficiency in every respect.

The need of conservative action at the present juncture is heightened by the attitude of State legislatures. The regulation of railroad rates is not taking precisely the same form to-day that it did in the agitation of 1873 and 1874, but it is hardly less sweeping in its effects. The debates in many of the State legislatures, and particularly in that of Iowa, show an avowed disregard of the most elementary principles of law. The State legislature is acting in the interest of those who use the road and against that of those who own it. Under such circumstances, the question of protecting railroad investors becomes a matter of the highest practical moment. There is most serious cause for regret that the Interstate Commerce Commission should have been forced to choose the present time for disclaiming the power to act in this way.

While the roads were thus left unprotected from outside, the pooling clause has made it impossible for them to protect themselves. The high nominal standard of virtue required by the law, coupled with the impossibility of enforcing it against rivals or of getting any reward for it one's self, has led first to mutual suspicion and then to serious evasions. Publicity and stability of rates, desirable alike for the railroads and the public, have been thus

sacrificed. Reductions are often made by irresponsible agents, with little or no benefit to legitimate trade and damaging loss to the railroads concerned.

As the result of these influences, the value of railroad property has fallen enormously. It is doubtful whether the combined effect of the crisis of 1873 and the Granger legislation of the same period produced any greater aggregate effect in depressing prices. Of forty-seven among the more important active stocks quoted in New York City,* only four show an advance, which is slight in each case: the remainder show a decline, and usually a very marked one. The par value of these stocks was a little over \$1,500,000,000. Their actual value on April 4, 1887, when the Interstate Commerce Law went into effect, was about \$1,000,000,000. On December 4, 1888, their value was less than \$800,000,000, a loss of over 20 per cent. in twenty months, and of \$210,000,000 in aggregate value.†

* In making up the list, those active stocks have been omitted (1) which are not directly affected by the act (like Manhattan or Canadian Pacific); (2) those which amount to less than \$10,000,000 par value; (3) those which have had large payments on stock or new stock issues of magnitude. The list itself is as follows: —

Security.	Price April 4, 1887.	Price Dec. 4, 1888.
Atchison, Top. & S. F.	105	53
Atlantic & Pacific	12	7
Canada Southern	62	51
Central of N J.	75	89
Central Pacific	40	34
C., B. & Q.	140	105
C., M. & St. Paul	93	61
" " pref.	122	101
C. & N.W.	121	104
" " pref.	147	137
C., R.I. & P.	126	99
C., St. L. & Pitts., pref.	48	34
C., St. P., M. & Omaha	51	31
" " "	112	97
C., C., C. & I.	65	53
Col., Hock. Val. & Tol.	32	23
D., L. & W.	134	135
Denver & R.G.	31	16
" " pref.	64	43
E. T., Va. & G.	14	8
" " 1st pref.	75	65
" " 2d pref.	26	20
Lake Erie & West.	23	16
" " pref.	58	47
Lake Shore & M. S.	96	99
Louisville & Nashville	67	53
Michigan Central	93	85
Mo., Kan. & Texas	33	12
Missouri Pacific	109	69
N.Y. C. & H.R.	113	107
N.Y., L.E. & Western	34	25
N.Y. & New England	64	38
N.Y., Ont. & Western	19	15
N.Y., Susq. & West	13	8
" " " pref.	31	30
Norfolk & Western	22	16
" " pref.	52	48
Northern Pacific	29	24
" " pref.	60	58
Ohio & Mississippi	32	21
Oreg. & Transcon.	33	29
Richmond & West Pt.	42	23
St. Louis, Ark. & Tex.	23	8
St L, & San Fran.	34	23
" " pref.	70	63
St. P., Min. & Man.	118	90
Union Pacific	61	62

† A similar list of forty-five stocks in the *Railroad Gazette* of September 27, 1878, shows a larger percentage fall in the crisis of 1873, but a smaller aggregate one; the maximum value being \$567,000,000, and the minimum \$380,000,000.

It is not probable that other railroad stocks have changed in quite the same ratio. The inactive stocks have in many instances shown a tendency to rise. But the general movement has been a downward one; and, as the list given includes only a little over one-third of the railroads of the country, and does not include some companies which have been among the most severe sufferers, it is not unlikely that the total depreciation of railroad stock during the operation of the Interstate Commerce Act may have amounted to something like $500,000,000.

To those interested in the financial prosperity of the country, such a result is obviously most unfortunate. It is not until recently that the magnitude of the change has been appreciated by the public. It has resulted in a movement for the modification of some of the provisions of the Interstate Commerce Act, and particularly of the clause against pooling. A collection of opinions published in a recent number of Bradstreet's * shows how widespread is the feeling on this point. Many of those whose opinions were quoted had opposed the prohibition of pools from the outset, and had believed that all the safeguards provided by the Interstate Commerce Act against rate-cutting and discrimination would be of little permanent avail if this clause were retained in the act. But there were others who were willing to see the experiment tried, and who have now become convinced of its failure. This change of sentiment among lawyers and financiers is highly significant; but for the present there is not much reason to expect any tangible results from it. A movement to repeal the clause against pooling will be opposed by two distinct bodies of men, either of them alone perhaps strong enough to defeat it. In the first place, there are those who supported the Interstate Commerce Law out of hostility to corporations as such. To these men, any reduction in rates is welcome. If it hurts the financial prosperity of railroads, they like it all the better, be-

* December 1, 1888.

cause it indicates that they have accomplished their object. Only when the loss becomes so great as to check railroad building and interfere with the development of shippers' facilities can we expect any change of sentiment from this quarter. In the second place, there is a class of men who admit the existence of the present evils, but deny that they are a direct result of the Interstate Commerce Law. They claim that it is the railroad managers' own fault that things have taken their present course, and insist that it is the railroad stockholders and not Congress or the law that are to blame for the present crisis.

This is the position taken by the Interstate Commerce Commission in their second annual report. They admit the existence of the evils which we describe, and deplore them most seriously. They say explicitly that unreasonably low rates are a disadvantage to the community. Any benefit from such rates is but temporary, and falls, for the most part, into the hands of speculators. To legitimate business, steadiness of rates is of the highest importance, and unreasonably low rates cannot be steadily maintained. If they last for any length of time, they are inconsistent with efficient service. If they are established on a large scale, they enable railroad managers to make money by stock-jobbing at the expense of the legitimate investor.* But the commissioners hold at the same time that these results cannot properly be charged to the operation of the Interstate Commerce Act. They believe that the prohibitions of the act in their direct effects have tended to benefit the revenues of the carriers and not to deplete them, making all traffic more generally and more evenly remunerative. They say that the severe losses of the railroads during the past year have not been due to the act to regulate commerce, but to special causes, like the Chicago, Burlington & Quincy strike, which for months was a seriously disturbing factor in the transportation of the whole region affected. They further say that the con-

* Second Annual Report, pp. 20-23.

struction of new lines of road and the sharply competitive rate wars are still more directly responsible for the present crisis, and that these cannot with any justice be claimed to have resulted from the act or from its administration.*

The first of these points, with regard to the direct effect of the act on rates, is at least partially true. The average charge per ton per mile in 1886 was 1.042 cents; in 1887 it was 1.063 cents. Inasmuch as this change was accompanied by an increase in the volume of traffic, it resulted in an increase of revenue; but we must not overlook the fact that it was accompanied by an increase in expense per train-mile at the same time. Though the volume of traffic was greater, the average distance carried was somewhat shorter. The proportion of local traffic, which is more expensive to handle, was, so far as we can judge from the incomplete returns at hand, distinctly larger. While the traffic may have been more "evenly" remunerative, it is doubtful whether it was more "generally" so. The fact already noted, that operating expenses have increased faster than gross earnings, creates a strong presumption that the benefit was not so great as the Commission assumes.

The Chicago, Burlington & Quincy strike was a serious element of loss, but it does not deserve the importance which the Commission assigns to it. The fall in value of the Burlington securities was great; but it was not very much greater than that of some other companies similarly situated, and it forms but an inconsiderable fraction of the whole loss of the railroads of the country. There is apt to be a serious fallacy in treating a strike of this kind as an independent cause of depression. It is much more commonly a result of such depression rather than a cause. The serious railroad strikes have occurred after trouble has begun rather than before it. They are due to an inability of the companies to meet the demands

* Second Annual Report, pp. 17, 18.

of their workmen without serious loss, and for this inability the cause must be sought in the operation of more general conditions.

These conditions may fairly enough be described as the Commission describes them,—parallel railroad construction and wars of rates. But, when the Commission goes on to say that they cannot with any justice be claimed to have resulted from the act or from its administration, they make an unwarranted assertion.* It was understood and expected in advance by the great majority of those who studied the act, whether advocates or opponents, that the prohibition of pools would have some such result as this. It is a universal experience, not of America alone, but of all countries with complicated railroad systems, that only by pooling contracts can stable arrangements between competing systems be maintained. If it had been possible for the railroads to maintain traffic agreements without pools, Mr. Reagan and his supporters would not have been so strenuous in supporting this section. They wanted rates reduced, and they got what they wanted. Railroad men said all along that such a result would be inevitable. The facts have proved that they were right. All the arguments of the Commission as to what railroad managers might do and ought to do are mere expressions of opinion, unsupported by a single historical instance where they have been carried out in

* The following paragraphs were written prior to the recent utterances of Judge Cooley and Mr. Adams on the subject of railroad morals. While recognizing the force of many things which they say, the writer sees no reason to modify his statements. Railroad morals to-day are bad; but why? Not because railroad agents are generally dishonest, but because the law prohibits the most practicable check upon the dishonest ones. That they are unprecedentedly bad, as Mr. Adams claims, we do not believe; for there were worse abuses before pooling began than any which he has to-day cited. Still less can we admit Judge Cooley's reported statement that the result is surprising. Prohibit pools, and it is natural to expect a recurrence of the evils which pools kept in check. The only surprising thing is that they were so long in making themselves felt. The present state of affairs was predicted without reserve in the *Railroad Gazette* of Jan. 14, 1887.

practice. The Commission complains because subordinates on one railroad system are allowed to meet a cut rate on another system. A road which did not allow such discretion would lose a large part of its competitive traffic. The Commission complains, with somewhat more justice, that one road will reduce rates on the mere suspicion of unfair practices on the part of another. But, if traffic is actually diverted, it becomes almost a business necessity to protect one's own interest even without positive proof of the existence of rebates on the other line. For this proof can only be obtained after long waiting, while immediate action is demanded in self-defence. All through this part of the report, the Commission fails to grasp the fact that it involves more serious loss to let competitive business go than to carry it at unreasonably low rates; and that the actual diversion of business must often be accepted by a railroad company as an indication that the agents of the other line are granting special reductions, even without convincing proof of the fact.

Somewhat the same reasoning holds with regard to the construction of parallel lines. If railroads are liable to sharp competitive warfare at any moment, it is a necessity for each railroad to control its own feeders. Even if such lines are more effective in injuring its rivals than for any other purpose, there is a strong temptation to build them. Just so far as the prohibition of pools increases the liability to a state of war, it also increases the inducement to build parallel railroads where they are not needed by the business of the country.

But it may be said that the prohibition of pools ought not to involve the necessity of warfare. It would not, if all the railroad managers and their subordinate agents were on a higher moral plane than nine-tenths of the rest of the community. A large part of the reasoning of the Commission assumes that it might fairly be expected that they should be. This assumption, however complimentary

to the standard of our railroad service, is considerably in advance of the facts. As long as it is only true of some railroad officials and not of all, railroad wars will be almost inevitable under the existing law. The prohibition of pools enables the most reckless among several companies to set the standard for the whole competitive business, and the short-haul clause simply makes this result more destructive financially by forcing the same standard upon the non-competitive business also. To preach peace to the good railroad officials when the bad railroad officials will get the whole competitive traffic on such terms is like insisting on the disarmament of one or two countries in Europe, while others maintain their existing preparations for war. We may go one step farther in the analogy, and say that to preach peace measures to the railroads and to prohibit pools by law, is like urging disarmament in Europe and at the same time removing all the sanction for existing treaties and all the police regulations by which it has become possible to enforce them. Such a project would not mean peace. It would mean war on such terms as to secure the survival of the unfittest.

But, however much we may disagree with the ground taken by the Interstate Commerce Commission, we cannot overlook the fact that their views represent the opinion of a large part even of the more enlightened section of the community, and that it is hopeless to expect any essential modification of the act until the Commission has come to recognize the necessity. Accepting the fact that the prohibition of pools is likely to continue, it is worth while to inquire what will be the probable results in the immediate future.

1. It is possible that there may be an organized effort to evade the prohibition. The recent attempt to establish a clearing house in the South-west may be regarded as a symptom of this tendency. It is a symptom rather than

an actual instance; for it was not successfully carried out, and, if it had been, it would not have been equivalent to a pool. A clearing house simply furnishes a new and better means of detecting violations of a rate agreement, while a pool is a means of removing suspicion by rendering such violations of the rate agreement unprofitable to the road which practises them. No matter how good the detective system of the clearing house, it will not be able wholly to reach the results obtained by a pool. It will make the granting of rebates more difficult and more secret, and thus far less profitable; but it will not remove the suspicion of bad faith when traffic is diverted from one road to another. As long as the combinations of shippers have the power to divert traffic on a large scale, it will be possible for them to arouse this suspicion. To allow combinations of shippers to deal with isolated roads individually and then expect the roads themselves to maintain rates is likely to prove a mistake, however well their clearing house may be organized.

There is a chance that pools may be formed even under the present law without technical violation of its provisions. An agreement among several roads that a clearing house shall make insufficient allowance for expenses on the freight of any road which receives an increased percentage of traffic without showing special cause therefor, has most of the effects of a pool. Without actually dividing or diverting traffic, it makes it an object for the road which obtains an increased percentage to stiffen its rates, and thus indirectly to induce shippers to seek other routes. This was in substance the policy pursued by the Southern association at one period of its history. Whether it were held to be illegal would largely depend upon the discretion of the courts. They would not enforce such an agreement; but they might not hold that it was subject to the special prohibitions and penalties of the Interstate Commerce Act.

Should this attempt be unsuccessful, actual consolidation

is always possible. It is not unlikely that the Interstate Commerce Act, if it should continue in operation in its present form for a long time, would cause direct consolidation of competing interests where otherwise a pool would be sufficient. Whether this result is to be regarded as desirable depends partly on the *personnel* of the resulting management and partly on the point of view of the critic.

2. But there is another possible outcome of the whole matter, which is worth considering. If the railroads should fail to make effective combinations within any reasonable time, and if the present fall in prices should continue, a reduction of new railroad construction must inevitably follow. This was the case in 1874 and 1875. It was this which produced the effective reaction against the Granger legislation. The men who cared least for investors' rights were those who cared most for shippers' facilities. As soon as forced reductions in rates, whether directly established by law or indirectly produced by competition, reach a point where they check the development of the community, a reaction is sure to follow. If this should come, it might readily carry with it, not merely the repeal of the section against pooling, but of other more vital parts of the Interstate Commerce Act. This contingency is prominently in the mind of so careful a student of the railroad problem as Mr. Sterne, when he says that he now advocates the repeal of the pooling clause lest, in the attempt to maintain it, the whole fabric of the Interstate Commerce Law be injured.

It is too early to predict which of these directions events are likely to take. Much will depend upon conditions which are at present unknown. Should the harvests of 1889 prove abundant and general business at the same time be prosperous, the fall in railroad values might be so far arrested as to give the railroads time for organization before matters reach a crisis. In that case, we may hope

for a gradual development of railroad service in such a manner as to adapt itself to the existing law. But if the harvests should prove deficient or manufactures unprosperous, or if there should be anything like a crisis in the money market, a further depression in railroad business is inevitable; and any added depreciation, coming at the present juncture, would almost certainly produce a reaction against national control not unlike that which swept away or reduced to abeyance the state laws in the Upper Mississippi Valley thirteen years ago.

ARTHUR T. HADLEY.

THE FUNDAMENTAL IDEA OF CAPITAL.

It requires but little study to make evident that the term "capital" is used in a variety of ways, each of which is necessary to develop some line of economic thought worthy of attention. Almost every writer on economic subjects uses the word "capital" in a new sense, or at least gives it a definition differing from all others. So varied a use of the term cannot but make the whole subject ambiguous and perplexing. Any proposition concerning capital is true only when capital is defined in a particular way. Great confusion is caused by authors not perceiving that in different propositions they have used the term in different ways. It is not the purpose of this article to magnify the importance of the use of the term in the sense in which I shall use it, nor to belittle other discussions where it is used in other senses. It is, however, to be hoped that this discussion will tend to make writers more conscious of the many ways in which it is now used, and help to establish a more definite usage of the term. Some usage ought to be accepted as fundamental; and, when it is used in any other way, some other word should be used, or at least some modifying word should be introduced. This is especially true of the widely different ways in which the word is used in production and distribution. It is so easy to confuse one usage with the other that no escape from the present confusion seems possible without some addition to or modification of the vocabulary of economic words. We really need new words more than we do new thoughts.

No intelligent discussion can be carried on unless the fundamental idea of capital is first grasped; and, when any modification is introduced pending the discussion of

particular problems, care must be taken that propositions founded on different definitions are not combined to make further deductions.

What, then, is the fundamental idea of capital?

There are three ways in which labor may co-operate to increase the productiveness of industry.

In the first place, by combination. Two men working together in many simple operations can do more than three or even a larger number of laborers, if each should work by himself. This is the case in the felling of trees, the lifting of heavy weights, the moving of large boats, and in innumerable other instances of the same kind.

Secondly, there is the division of labor. More will be produced if some laborers devote their entire attention to producing one article, obtaining whatever else they want by exchanging their produce for that of others. Thus more is produced when some are farmers, others tailors, weavers, blacksmiths, and the like, than if each one endeavored to supply his wants by producing everything for himself.

Thirdly, there is the order in which the labor is performed. One hundred days' work done successively will produce, in many cases, a greater quantity than if all the work is done on the same day. There being a need of a given amount of food, it can be obtained with less expenditure of labor if the labor is mostly performed several months before the supply becomes necessary than if nothing is done until the day is at hand on which there is a demand for the food. If the labor is delayed until the time arrives, the only remaining resources for acquiring nourishment are hunting, fishing, berrying, and the like; and of these the supply is very limited, and much work is required to obtain a supply from these resources, if any considerable quantity is desired. On the other hand, if land is ploughed, prepared, and sowed to wheat several months before there is a scarcity of food, a much larger

amount of food is produced and at a much less expenditure of labor. Again, a supply of cloth being essential, a much larger quantity can be obtained for the same labor if, previous to the time when it is required, a part of the labor has been employed to prepare machines on which the cloth can be woven.

The production of wheat offers a good example for showing how the use of capital causes the exertion of labor in a series involving time, and how the series becomes longer as a more extensive use is made of capital. Doubtless, the first consumers of wheat found it growing wild. They gathered and used it as they did fruits and berries. In this case there was no use made of capital, the consumption immediately following the labor of gathering the wheat. Soon they found that wheat could be easily preserved and consumed when the other fruits, which cannot be preserved for any length of time, could not be obtained. Now the use of capital began as there was an interval of time between the act of gathering and the time of consumption, and during this interval some labor must be continually exerted to preserve the wheat from decay or prevent its loss by theft. At length, when wheat growing wild would not supply the wants of all desiring it, the discovery was made that by cultivation the supply could be greatly increased. The series of acts necessary to produce wheat thus became lengthened out several months, while the need of protecting the crops by fences added a much longer period to the time by which the first and the last acts of production were separated from one another. Subsequently, the desire to exchange other commodities for wheat produced at a distance caused the use of wagons, ships, and railroads, and for their construction the series of acts necessary to obtain the wheat was again extended. In these and many other ways, such as the draining of the land, the use of tools, and the grinding of the wheat, the interval of time between the first act

of the production of wheat and its final consumption has been gradually lengthened by the use of more complicated processes of production; and, during this interval, labor must be constantly exerted, or there will be a diminution of the quantity of wheat which the last acts of production bring the consumers. On all sides can be seen illustrations of like character, showing how the series of acts necessary for production has gradually been lengthened by improved industrial processes; and I now wish to point out what deductions can be drawn from these facts.

There is a radical difference between this method of co-operation and the others mentioned. By the other methods labor is economized, but the supply of commodities is not enlarged; while by this method the supply is vastly increased. If a large number of persons hunt together, they can kill more game, but they do not increase the supply of game. So, too, if several co-operate to cut down and saw trees, they save labor, but do not increase the supply of wood. In the same way it may be shown that the two first-mentioned modes of co-operation do not enlarge the quantity of food or other raw materials, only causing the present supply to be more economically used and labor spared. When food is produced by the cultivation of land, the supply is greatly increased, and a much larger population can be supported than before: their average condition also will be much better, there being not only a greater population, but it is supplied with food with much less labor.

The reward of each laborer must vary in proportion to the length of time which must elapse between the performance of the labor and the time at which the commodity is ready for consumption. If a hundred successive days' labor is necessary to prepare a commodity for consumption, the one who does the first day's work must have more than he who performs the last day's work; for, if they shared alike, each one would desire to do the

last day's work, and no one would perform the first day's work. The difference between the shares which the laborer performing the first day's work receives and he who performs the last day's work is the reward for abstinence. This reward will be greater or smaller according as more or less inducement must be offered to obtain some one willing to defer his consumption until the commodity being produced is ready for use. The amount which the last laborer receives for his day's work is his wages, for he did not defer his consumption. Each one of the other laborers will receive more than the last laborer in proportion to the length of time which must elapse before the commodity is ready for consumption; and this reward for abstinence is called interest. Any of the laborers can sell his right to future consumption and get the present worth of his right, which will always be equal to the amount received by the one doing the last day's work. Hence, the wages of the laborers will be equal if each disposes of his right as soon as the work is performed.

The idea of capital does not necessarily imply a previously accumulated stock of produce for the support of the laborers. This point has been so much insisted upon as something essential to the idea of capital that it is necessary to show exactly in what this opinion is erroneous. The commonly accepted view can be best illustrated by using the production of food as an example. This is usually taken, because it shows the accepted view in the clearest light. The crops are sown in the spring, it is said, and many months elapse before the harvest; and, if the laborers were not maintained in the mean time from the produce of past labor, they would necessarily perish.

I do not deny the fact that they must, in this case, be supported from a previous accumulated stock, but I do assert that this fact has no connection with the idea of capital. To illustrate my meaning, let us suppose that

nature was somewhat different; that, instead of all the crops necessarily being sown in the spring, they could be sown at any time, and would mature at the end of a year; and that farmers, instead of sowing all at one time, sowed each month one-twelfth of what was needed for the year. In this case, they would reap enough every month to support themselves that month, and sow a like quantity in the same place to support themselves the same month the next year. They would now need no previously accumulated stock of food to support them until their crop ripened; yet, in the latter instance, capital has been used just as much as in the former. If the return for labor is uncertain, or the work can only be done at particular times, then a previously accumulated stock is necessary; but, where the produce comes in regularly, there is no need of such a stock. Agriculture is almost the only instance which we now have where a previously accumulated stock is necessary. In manufactories everywhere, the work goes on regularly; and each day sees completed a new supply sufficient for the wants of the community. Wherever a stock of manufactured goods is kept, it is not to assist production, but to enable consumers to have a large assortment to choose from. It is the convenience of the consumers, and not the needs of production, that causes such stocks to be kept.

That in a society where all the produce comes in regularly, and no previously accumulated stock is needed, capital is necessary, and just as much so as in a society existing in our time, where the supply of food comes in irregularly, can be well illustrated in the following manner: The commodities which are produced are divided into two classes, which I, for sake of distinguishing them, will call products and produce. Commodities are produce which will directly satisfy a want of man, and are desired by men on their own account. For instance, we all desire bread and meat because they satisfy our

hunger. We want clothes to keep us warm, houses to protect us from the weather, music, books, and paintings to amuse and instruct us. All these and many other things of like nature we desire because they directly enable us to be happy and contented. Besides these there are many products which no one wants because they can directly satisfy his desires, but because, with their aid, he can produce more abundantly those things which he wants. No one wants a plough, a spade, an engine, or a loom for any pleasure that he can get out of them at the present time, but because by their use he can have at a future time a better supply of food, clothes, books, and other produce than if he did not have them. Tools, machinery, and other instruments of production in the possession of individuals or communities are merely means for the attainment of their ends, and are not things desired on their own account, and hence, from the stand-point of the consumer, are unfinished produce or products; while those things like food and clothes are finished produce. A plough is so many loaves of bread partly made, while a loom and the engine which moves it are partly made coats; that is, society, having determined to make some more bread and coats, is so far along in the work that it has made a plough, a loom, and an engine to propel it.

This view can be still more generally represented in the following way: All labor is employed in putting objects in motion; and, by these motions, we effect what we desire. When we wish a coat or some bread, some of our laborers begin a series of motions, then others take their places and continue the series of motions, and these are followed by still others; and, finally, after many sets of laborers have followed one another, all keeping up the series of motions, the coat, bread, or other desired article appears, and our desires are satisfied.

In all this, we have a series of successive motions — or, in other words, days' labor — exerted to produce a de-

sired commodity; and, wherever this is the case, the idea of capital is involved. At the end of each day's labor, we have a given amount of produce or commodities capable of directly satisfying some desire, and a certain number of products to which still more labor must be added before they will of themselves be desirable. Those laborers who have been employed on products must, by exchange, obtain the food, shelter, clothes, and other desired produce. The question now arises, What will be the ratio at which products will exchange with the produce? or, in other words, How will ploughs and machines exchange with food and clothes? The reply must be that products will not exchange on equal terms with produce; that is, a given number of days' work in ploughs and machinery will not exchange for the same number of days' work in food and clothes. Whoever takes the ploughs must wait a long time before his ploughs become food; and no one will exchange a given quantity of food for the same quantity at a future time, at least not while human nature retains its present characteristics. Ploughs and other products must therefore exchange for a less quantity of food and other produce, measured in the number of days' work required to produce them, and enough less so that some one will consent to exchange food, clothes, etc., for them.

There are two stand-points from which we can view production in which the use of capital is involved. We can suppose the laborers agreeing before the labor begins as to how the produce will be divided. In that case, the agreement must be that he who does the first day's work must receive more than he who does the last, and the other laborers must receive more than the last laborer, in proportion as a greater length of time must elapse from the time they work to that in which the product is completed. We may also consider, as is usually the case, that each laborer or set of laborers does his or their part, and then they

exchange products to obtain what they desire. In this case, products like ploughs and engines will not exchange in proportion to the quantity of work required to produce them with food, clothes, and other produce. These two views are the same, only the point of observation is changed. To say that a laborer will not do the first day's work unless he has more of the final produce than he who does the last day's work is the same in substance as to say that the product of the man doing the first day's work, at that time, will not exchange for a full day's work in food or clothes. Whichever stand-point we take will give us a clear view of what is involved in the idea of capital. This idea, however, must be kept distinct from an accumulated stock, the necessity of which arises from other causes.

The commonly accepted view of capital and its errors may be well illustrated as follows. Suppose, in a community living on fish obtained by hook and line, some one conceives the idea of building a boat to aid them in fishing, and, wanting another laborer to help him make it, offers him four fishes to stay at home and assist in making the boat. The man says that he must see the fishes before he goes to work, for he will be hungry at night; and, if there is no stock of fishes on hand, he will suffer. The employer shows him the stock of four fishes, and the man remains at home and helps make the boat. Having completed the boat that day, they exchange it for fish with some of the fishers, thus replenishing the employer's stock. This labor of making boats is continued from day to day; and each night a boat is finished and exchanged for fish. Soon the laborer finds that his master receives fresh fish each night, and, preferring them to those received the night before, which are no longer very fresh, willingly takes those last received instead of those caught the day before. When this happens, the master can eat up or throw away his accumulated stock, and still production go on as before. It is true, when they begin to work, they

have no stock of food; but by the time they need it the fishermen come home with a stock, and they have made a boat which they can exchange for food.

There is a cause greatly increasing the accumulated stock of produce which nations in our present state of civilization must possess for productive purposes. Most of the laborers do not save for themselves, thus necessitating a class of capitalists who accumulate wealth, not only for their own use, but also for others who prefer immediate enjoyment and a diminished return for their labor to the increased return obtained by deferred consumption.

The motive which induces a man saving for himself to labor to-day for the needs of the morrow, instead of waiting till to-morrow, is of a different nature from that which prompts his neighbor who is not willing to save. Whoever saves for himself labors to-day instead of to-morrow, because labor exerted before the product is needed increases the return. If he labors to-day and enjoys himself to-morrow, he will have more leisure and a greater sum of pleasures than if he had his pleasures precede his labor. That he is willing to conform to the demands of natural conditions, and work when his labor is most efficient, does not increase his need of an accumulated stock of produce. He does not defer his consumption of food; for he eats the same amount whether he works to-day or to-morrow. He does not reduce his consumption of food, but he defers the other pleasures which he could have enjoyed if he had not labored. Suppose, for example, the question arises whether he shall visit some of his friends for two weeks this year or remain at home and dig a ditch which will so increase the produce of his farm that he can next year spare three weeks for a visit. The thought of food would not enter his head. The only question would be whether a visit of three weeks next year offers a greater inducement than a visit of two weeks this year; and he decides to wait, because he can in this way increase his means of

enjoyment. Deferred consumption does not necessitate a stock of produce where the producer has other enjoyments than the consumption of material commodities. He may defer his other pleasures; and thus, without increasing his stock, he may enjoy the increased return which Nature gives to those who comply with her conditions. In this manner, all the improvements which augment the return for labor could be made without the use of accumulated stock, except in those cases, like the production of food, where the produce comes irregularly.

For a person who does not save for himself, the motive for working to-day instead of waiting till to-morrow is very different. In his case, the necessity of an accumulated stock of produce arises not so much from his unwillingness to defer his unexclusive pleasures, but because he has no other pleasures than those derived from the consumption of a stock of produce. If he had other pleasures, he could enjoy them without a stock of produce; but whoever wishes to consume a stock of commodities must first have the stock before his pleasures can begin. A supply of food sufficient for many days can be consumed in one day for mere pleasure, or all labor may be deferred till the whole supply is exhausted. In either case, the consumer becomes dependent on some one who has accumulated a stock; and only as a stock is accumulated can such a class of laborers exist in any society subsequent to the original social state where no stock was needed.

These illustrations show that no accumulated stock of produce is needed in a community where each one saves for himself, and where at the same time production is carried on regularly, the produce coming in without interruption. When work begins in the morning, there may not be a single consumable commodity in the town; but each producer relies on the other producers to furnish each his share. There may be no bread, but the bakers are at work; and no meat, but the butchers are killing

and dressing some cattle; and no coats, but the tailors are making some; and so, through the whole round, each one is preparing some article, and by night there will be the full supply of consumable articles on hand ready for consumption. Every day this can be repeated, and production go on as before. Still, such a community uses capital; and it is just as necessary to them as if production were irregular and an accumulated stock of produce was needed, even if they do consume all they produce as soon as it is ready for consumption. Although no one has accumulated a stock, some one has deferred his consumption by working instead of enjoying his unexclusive pleasures; and his rights are as valid as are the rights of those who have on that day labored. If no one had worked yesterday, the supply of consumable commodities would not be here to-day, at least not in so great a quantity. The workman of yesterday, then, or he to whom he has transferred his rights, must have his claims satisfied as well as the workman of to-day.

It is usually allowed that labor expended on land to improve and render it permanently better fit for tillage is capital. Since Adam Smith, the labor expended to elevate and educate the laborer himself is denied to be capital. But this is without good reason, and important truths are thus overlooked and neglected. Labor expended beforehand on the laborers will increase the produce of industry just as much as the labor expended in making machines or improving the land. There is no reason why one should be called capital and the other not. The idea of capital is not correctly apprehended, unless the term "capital" is applied to everything on which, labor being expended before the produce is wanted, the return will be increased beyond what it would be if the same labor had been exerted contemporaneously. For excluding the acquired abilities of the laborers, the reason is usually assigned that by including them we confuse the problems

of distribution, since the reward of the laborer depends on laws of its own, distinct from that of capital. This is true; but, for the same reason, capital sunk in land should be also excluded, as its reward depends on rent and not on profits. Capital, as the term is used in distribution, is a much more limited term than when used in production; and only confusion can arise when the two uses of the term are not kept distinct.

It is the problem in distribution to determine how the produce of industry, commodities capable in themselves of giving pleasure and satisfying the desires of the consumers, is to be divided among those aiding in production. The question is, Who gets the produce of industry? and not, Who gets the products? If any factor, for instance the capitalists, should continually take its share in tools, machines, and other products, and leave the produce of industry — food, clothing, and the like — to the other factors, the capitalists would be simply working for nothing, the products being constantly turned into produce; and then they would be consumed by other classes. The produce is distributed as rent, wages, and interest; and the capital from which interest is derived has reference only to the commodities consumed in the production of the produce divided. It has been consumed in production, and must be replaced before production can go on.

On the other hand, capital in production must have an entirely different and much broader meaning. The original factors were land and labor; and subsequently capital came to be used, because labor performed before the produce was needed gave a greater return than labor exerted at the time. This labor could be exerted in three different ways, each of which would increase the produce of industry,— in improving the land, in enlarging the productive capacities of the laborers, and in manufacturing products, such as tools, which, in being consumed, assist in production. These three have a common cause. They

are labor exerted beforehand in order to increase the produce, and hence the same term should be applied to them all; and it is only when capital is used in this sense that land, labor, and capital have a distinct meaning in production.

What were the original qualities of any soil is a question of little importance. Labor has added many qualities to the original ones possessed by the best lands formerly in use, and the poor lands have become good through the qualities obtained by the increase of knowledge and the skilful application of labor. These acquired qualities, which have gradually increased the productive capacities of the soil, are as permanent in their effects as are the original ones furnished by nature; and it does not require an extra expenditure of labor to preserve what the labor of the past has done to aid the labor of the present. Each generation finds the land in a better condition than its predecessors found it, and can obtain a greater produce with less proportional labor.

This is not all the labor of the past has done for the present generation. Besides improving the land, it has also added to the productive capacities of the laborers themselves. Those qualities which our ancestors acquired with much labor have been transmitted to us, and our organisms have become so modified that we can perform the acts necessary in civilized life with less labor than our forefathers. The children of a spinner, a merchant, or a farmer inherit the qualities necessary to the successful performance of the labor of their callings; and, when the father retires, the son can do his work with less labor. There is also an increasing stock of free knowledge which descends from one age to another. Without any cost, we acquire much the greater part of the skill and knowledge of our fathers. Children see and hear what is going on around them, and learn how to preserve health, to avoid evils, and also to obtain a large part of the

knowledge necessary for following any trade or profession without the expenditure of labor by any one. Even the labor of teaching reading and writing, or any other acquirement the labor of which must be repeated for every generation, becomes easier to each succeeding age, since children of the educated acquire knowledge more readily than do those of the ignorant.

Nor is it only in the acquired qualities increasing the productive capacity of man that the labor of the past has brought about a better adjustment of man to his environments. The pleasures and wants of the original man were few and simple, since he only desired to have his passions and appetites satisfied. He required only one kind of food, such as flesh, wheat, or rice; and all his pleasures being physical, whose enjoyment excludes the mutual enjoyment of others, he demanded for consumption only those articles of which the soil can produce but small quantities. As soon, however, as the results of education so add to the original qualities possessed by man that he willingly conforms more to the external conditions about him, he obtains from nature more liberal rewards for his efforts, his wants being less exclusive in their enjoyment and more varied in their kind. The more the acquired qualities of man enable him to enjoy all the pleasures that nature offers, the less exertion does nature require for their production. A field devoted alternately to several crops, such as wheat, rye, oats, and grass, will yield a much greater quantity of food than it will when used only for the production of any one kind. At the same time, by a rotation of crops the labor on the land is reduced. A series of crops keeps the soil porous and mellow, while the loss of productive qualities caused by the cultivation of some one crop increases the labor of preparing the soil. By a change of crops, also, weeds and destructive insects are excluded, or the labor of destroying them much reduced, since most of them have some one crop which they accompany, and

cannot survive if this crop is produced only once in a series of years. In these various ways, an ever-increasing proportional return for labor is obtained. The world becomes better fitted for men as men adjust themselves more fully to the conditions of nature.

From the preceding considerations, it will readily be seen that there are two distinct social states which must be kept distinct in thought. In one of these, the factors of production are the original man, the indestructible qualities of the soil, and a stock of perishable commodities. Nature cannot support many people in this state, and to them the law of diminishing returns is doubtless true. It is this state, where capital includes only commodities requiring constant renewal, that economists always have in mind when they seek to establish the now prevalent doctrines of land and population. But in a more highly civilized state the above-mentioned factors of production are no longer the sole causes of the increase of produce. They are supplemented by an ever-increasing stock of labor accumulated both in man and land, differing from a stock of commodities in that it does not perish, but is ever present, not only to reduce the work of man, but also to increase his means of enjoyment.

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NOTES AND MEMORANDA.

Valuable material for more thorough study of the Physiocratic writers is being brought to light. In addition to Messrs. Baer's exhaustive edition of Quesnay's works, we shall soon have the Physiocratic correspondence of Charles Frederic, Margrave of Baden. The *Deutsche Literaturzeitung* states that Professor Knies, who is editing the correspondence, expects to publish it in the course of 1889. The publication will embrace not only letters, but various theoretic disquisitions by Mirabeau and Dupont de Nemours. No doubt we shall get further light on Charles Frederic's curious attempts to put the Physiocratic ideas into practice in his dominion.

The *Journal des Économistes* for November gives the text of the proposed law for a general tax upon incomes presented by M. Peytral, the French Minister of Finance. It is hardly probable that this plan will ever pass into legislation, but it marks a stage in the present struggle for more revenue and for revenue at the cost of the well-to-do classes.

The chief characteristics of the proposition are these: —

It proposes to make the distinction, so often discussed, between temporary or uncertain incomes and those which are fixed, by taxing professional, industrial, and commercial incomes at one-half the rate at which fixed incomes from investments are taxed.

It proposes to tax for the first time the income from *rentes*, which in France has been treated as beyond the reach of the State except by a breach of faith; and it also makes the income tax cumulative with the three per cent. tax laid in 1872 upon certain large classes of personal securities.

It proposes to strike, as far as possible, the sources from which income is derived, instead of collecting from the recipient of the income, following in this respect the English law; but it also proposes to rely upon the system of personal decla-

rations of general income, hitherto supposed to be completely at variance with the French character as well as with the French practice.

The rate proposed is but one-half of one per cent. on professional and business incomes and one per cent. on incomes from property and investments; but, in the mind of the framer of the proposition, the rates now proposed are probably of little consequence in comparison with the establishment of the system in working order as a familiar part of the French administration.

THE English Gold and Silver Commission has divided equally on the subject of bimetallism, as the previously formed opinions of most of the members indicated; and it seems unlikely, therefore, that the investigation will have any practical effect on the general monetary question. It is not improbable, however, that it may hasten the introduction of some substitute for the small circulation now supplied in England by the half-sovereigns. Nearly all of the commissioners, both opponents and friends of the double standard, joined in recommending the issue of ten and twenty shilling notes, payable in silver, and the withdrawal of the small gold, the bad condition of which was noticed in this *Journal* for January, 1887 (p. 225). To such an issue of silver notes, an objection of some weight is made,—that Scotland and Ireland have already in use twenty shilling gold notes, and that confusion and mistake would be likely to arise from the issue of notes for common use similar in denomination, but redeemable in a different metal. The alternative suggestion favored by the *Economist* is the withdrawal of the half-sovereigns, the coinage of more silver of existing denominations, and the introduction of one-pound notes, payable in gold.

The introduction of Bank of England notes smaller than those now in use seems, in fact, to be not far off. The five-pound note, as a part of the working currency, is more and more complained of as ineffective; and it is interesting to observe that its diminished importance is ascribed to the increased efficiency of deposit banking. So great a proportion even of comparatively small payments are now made by

check that the five-pound note has no indispensable function. Below the five-pound line, however, there is an increasing multitude of transactions too minute to be settled by check, which strengthens the demand for a more convenient medium in small denominations.

The publication of the concluding volume of the ninth edition of the *Encyclopædia Britannica* will doubtless suggest a comparison of the new edition with its predecessor from many points of view; but in no department can a greater change have been made than in the political economy of this vast work. The economic revolution is, in fact, pretty well described by saying that it is from J. R. McCulloch in the eighth edition to J. K. Ingram in the ninth.

The eighth edition brought forward Ricardo's essay on the Funding System and Malthus's article on Population (both given in the supplement of 1824), and the Economists were discussed by the elder Mill; but, after this safe delegation of topics, Mr. McCulloch still held the main part of the field as his own. The articles written by him on Political Economy and Money (including Banking) were treatises; those on Corn Laws, Precious Metals, and Taxation were considerable essays; and when, in addition, he covered Wages and Adam Smith, there was little more to be said. The treatment of the whole subject in that edition was thus in severely conservative hands, and represents the English school in the strictest sense. The younger Mill does not appear among the writers on this subject, and Senior had treated it in the *Encyclopædia Metropolitana* in a way not in close accord with McCulloch's.

Dr. Ingram cleared his way, as it were, by writing for the ninth edition a short biographical notice of his predecessor,— there can hardly be a doubt as to the meaning of the initials "J. K. I.," subscribed to the article on McCulloch,—pronouncing a eulogy which is chiefly remarkable for its great sobriety. He then set the keynote by his own article on Political Economy, which has since been published independently, and has made a deep impression as an exposition from the new school. McCulloch's other treatise was replaced by Professor Bastable's article on Money and Mr. Leonard Courtney's

on Banking; Population as an economic topic nearly disappeared; Taxation and Wages were assigned to Professor Nicholson of Edinburgh, Free Trade to Professor Thorold Rogers, Socialism to Mr. T. Kirkup, and Adam Smith was of necessity treated by Dr. Ingram himself. Historical perspective, no doubt, required that Ricardo's essay on the Sinking Fund should be dropped, and in its place appeared an article on National Debt by Mr. J. Scott Keltie.

The writers in this new list are not distinctly of one school, as were those in the old one. Still, the predominating influence has clearly moved from the extreme right wing, and is now to be found well over upon the left. There would be little risk in predicting a return at least to the centre, when Dr. Ingram's successor makes a new distribution of the topics for fresh discussion in the tenth edition,— say in A.D. 1918.

AT the twenty-first annual Trades-union Congress, held at Bradford, England, in September last, there was some discussion of the agitation for an eight-hours working-day, and more particularly of the desirability of securing it by legislation. The Parliamentary Committee had sent out circulars, asking for an expression of opinion on the latter point. The answers to these inquiries came in some cases from individuals, in other cases from unions *en bloc*. Of the answers from individuals, about 17,000 were in favor of legislation for an eight-hours day, and 7,400 were against such legislation. But, of the unions answering, only ten were in favor of an eight-hours bill, and eleven were against it. Moreover, the eleven in the negative had more than twice as many members as the ten in the affirmative. Of five "trades councils," two were for a bill, three were against. It also appeared that only a "very small" proportion of those to whom these inquiries were directed answered at all, which indicates much lack of interest in the whole movement. The Committee recommended that the Congress should either let the matter drop or order another inquiry: the latter course was adopted.

A resolution on land reform was adopted, very like that of the previous year, advocating taxation of ground rents and

nationalization of land; in fact, declaring in terms "that no real and satisfactory settlement can be effected until the whole of the land of the United Kingdom has been restored to the people." This was carried by a vote of sixty-six to five. Another resolution, adopted unanimously, called for "more extended compulsory powers to local authorities to acquire land for small holdings."

A TYPICAL FRENCH FARM.

In the August number of the *Journal de la Société de Statistique de Paris*, M. Adolphe Coste has presented an ingenious statement of the average results of the French agricultural survey of 1882. He has assumed as the type of French agriculture a farm of 100 hectares, throwing aside the market gardens, vineyards, and other properties which are too small to be worked in real independence, and coming at once to a type large enough to represent a self-supporting agriculture,— the *usine rurale*, where corn and meat are produced in competition with the corn and meat of other countries. The class of farms actually in view comprises 437,957 properties, containing 30,641,459 hectares, giving an average of about 70 hectares each; but, for convenience of comparison, M. Coste prefers to take the round number 100, which greatly facilitates the application of his results.

Taking, then, the acreage of the principal products and grouping those which are closely related, he finds that to represent the distribution of French agriculture his typical 100 hectares would have to be allotted as follows:—

	Hectares.		*Hectares.*
Gardens, yards, buildings	1	*Brought forward*	56
Wheat	23	Peas and beans	1
Rye	6	Forage	13
Oats	15	Fallow	12
Barley	3		—
Industrial products (sugar beets, colza, flax, hemp, etc.)	2	Cultivated	82
		Grass lands	15
Potatoes	4	Pasture	3
Root crops	2		—
	—		100
	56		

In this distribution, M. Coste finds a curious proof of the continued existence of two methods of rotation in almost

equally extensive use. The old three years' rotation would divide 81 hectares as follows:—

Corn . . 27 Oats . . 27 Fallow . . 27

The four years' rotation would divide the same land between,—

Corn, $20\frac{1}{4}$ Roots, $10\frac{1}{8}$ Forage, $10\frac{1}{8}$ } $20\frac{1}{4}$ Oats, $20\frac{1}{4}$ Forage, $20\frac{1}{4}$

Or, if the two methods are equally in use, 81 hectares would be allotted to,—

Corn, $23\frac{5}{8}$ Oats, $23\frac{5}{8}$ Roots, $5\frac{1}{16}$ Forage, $15\frac{3}{16}$ Fallow, $13\frac{1}{2}$

The actual allotment appears to correspond closely to this mean, as follows:—

Wheat, with colza, flax, peas and beans,	25	Oats, with rye and barley,	24	Roots, potatoes, sugar beets,	7	Forage, 13	Fallow, 12

The returns of live stock, reducing all varieties to standard types, would show the 100 hectares to be provided with animals in number and weight as follows:—

7 working horses,	weighing	3,839 kilog.
6 working cattle,	"	2,742
1 bull,	"	370
22 cows,	"	7,260
14 young animals,	"	1,862
52 sheep,	"	1,664
28 lambs,	"	504
16 swine,	"	1,840
		19,581 kilog.

This live weight of 196 kilos per hectare is brought forward in order to show how far France is from that good state of cultivation which high authority finds represented by a live weight of 500 kilos per hectare, and as confirming the belief that the rotation with fallows in the third year is still widely practised. The large proportion which working animals bear to the whole of the stock is also remarked upon as in part the result of uneconomical methods, in part of the scattered position of the parcels which often make up a property, and in part of the imperfect railway communication in a large part of rural France.

The persons occupied in working this typical farm and their wages are estimated thus: —

		Wages.
Farmer and his wife	. . . .	—
Laborers,	3 at 325 fr.	975 fr.
Herdsman,	1	290
Shepherd,	1	200
Fem. servant,	1	235
Day laborers,	4 at 2.22 fr. 125 days	1,110
	" 3.11 fr. 125 "	1,555
	12 persons	4,365 fr.

The value of the farm and of the capital employed upon it is examined at some length by M. Coste, with the following result: —

Farm property: —			
Arable land,	worth	132,000 fr.	
Grass land and pasture,	"	45,000	
Buildings,	"	26,000	203,000 fr.
Capital employed: —			
Working animals,	worth	6,192 fr.	
Other live stock,	"	9,597	
Machinery, tools, carts, etc.,	"	6,500	
Other furnishing,	"	2,000	
Advances for seed, wages, and board for 8 persons,		4,711	29,000
Total			232,000 fr.

The rent, as calculated from the returns, would be 5,541 francs, or a trifle less than 2¾ per cent. of the value of the farm property. The pecuniary results of a year's operations are investigated with great minuteness by the help of the minute statements as to products contained in the official returns; but this part of the inquiry is open to so much question that we shall only present a summary, in which the results for 1885 are compared with those for 1882, contrasting a bad year with a good one, as giving a measure of the difficulties under which French agriculture now labors: —

Receipts for	1882.		1885.	
Vegetable products	12,573 fr.		10,374 fr.	
Animal products	9,845	22,418 fr.	9,705	20,079 fr.
Expenses for				
Rent	5,541 fr.			
Wages	4,365			
Board of 8 persons	2,920			
Seed	1,861			
Depreciation and loss . . .	1,389			
Mechanics, etc.	924	17,000		17,000 fr.
Balance		5,418 fr.		3,079 fr.

From this balance is to come the reward for the personal service of the farmer and his wife and the return on the capital employed upon the farm, amounting to 29,000 francs, as stated above.

SAVINGS BANK DIVIDENDS.

The changes in the earning-power of well-invested capital in the last half-century are illustrated in a striking manner by the figures which we present below, from the returns of three of the oldest Massachusetts Savings Banks. The Provident Institution for Savings and the Suffolk Savings Bank, together holding more than $48,000,000 of deposits, are the two largest and oldest savings institutions in Boston proper. The Lowell Institution for Savings has an especial interest from its position in a manufacturing city. All three may be taken as representing a class of trustees who wish to invest safely and yet profitably for the owners of the funds in their charge, — taking no commercial risks, holding the principal always within easy reach, and giving to depositors the benefit of the soundest judgment and most skilled management attainable.

In the following statement of dividends made to depositors by the Provident Institution and the Suffolk Savings Bank for fifty years, it is to be noted that extra dividends are averaged, over the years in which they were earned, and that the dividends have come to the depositor free from taxation in his hands: —

	Provident.	*Suffolk.*		*Provident.*	*Suffolk.*		*Provident.*	*Suffolk.*
1839	4.	5.42	1856	8.	7.	1873	6.	5.25
1840	4.	5.42	1857	7.	7.	1874	6.	5.25
1841	4.	5.43	1858	7.	7.	1875	6.	5·25
1842	7.85	5.43	1859	7.	7.	1876	6.	5.25
1843	7.85	5.43	1860	7.	7.	1877	5.	4.75
1844	7.85	5.43	1861	7.	7.	1878	4.	4.
1845	7.85	5.43	1862	8.	7.	1879	4.	4.
1846	7.85	5 43	1863	8.	8.	1880	4.	4.
1847	8.	5.43	1864	8.	8.	1881	3.	4.
1848	8.	7.	1865	8.	8.	1882	3.	4.
1849	8.	7.	1866	8.	8.	1883	3.50	4.
1850	8.	7.	1867	5.60	8.	1884	3.	3.50
1851	8.	7.	1868	6.60	6.50	1885	3.50	3.50
1852	8.	7.	1869	6.60	7.	1886	3.50	3.50
1853	8.	7.	1870	6.60	7.	1887	3.50	3.50
1854	8.	7·	1871	6.60	7.	1888	4.	4.
1855	8.	7.	1872	6.	7.			

	Provident.	*Suffolk.*
Amount of deposits, 1839,	$2,006,821.00	$162,942.00
" " " 1888,	27,548,641.00	20,705,252.00
Average dividend rate, 50 years,	6.245	5.922
" " " last 20 years,	4.69	4.787

The Lowell Institution for Savings has published a statement showing the growth of its deposits from 1829 to 1885, when its deposits were $3,504,392. It gives a table showing the

value of $100 deposited in 1829, at intervals of five years, from which may be deduced the rates of interest, compounded semi-annually, as follows: —

	Value of $100.	*Rate of interest.*
1835	$140.55	7—
1840	188.82	6
1845	242.72	5
1850	329.21	6—
1855	450.64	6+
1860	618.75	6½
1865	876.46	7
1870	1,224.11	7—
1875	1,671.34	6+
1880	2,039.68	4
1885	2,479.42	4

THE TARIFF LITERATURE OF THE CAMPAIGN.*

The campaign has brought forth, as was to be expected, a considerable crop of books and pamphlets on the question of protection. Of these, the most pretentious is Mr. Thompson's *History of Protective Tariff Laws*, a stout volume of five hundred pages, with large print, heavy paper, decorated binding, and divers prettily colored charts. Its exterior is characteristic of the class to which the book seems to belong, — the memoirs and histories which enterprising publishers contract for with men in public life, and which are expected to sell less on the score of intrinsic merit than by virtue of the author's name and a flurry of interest in the subject. A serious contribution to historical or economic knowledge is not to

*(1) *The History of Protective Tariff Laws.* By R. W. Thompson, ex-Secretary of the Navy. Chicago: R. S. Peale & Co. pp. 526.

(2) *Twenty-two Years of Protection.* By Henry V. Poor. New York: H. V. & H. W. Poor. pp. 222.

(3) *Is Protection a Benefit? A Plea for the Negative.* By Edward Taylor. Chicago: A. C. McClurg & Co. pp. 274.

(4) *The Tariff and its Evils.* By John H. Allen. New York: G. P. Putnam's Sons. [Questions of the Day, No. 53.] pp. 130.

(5) *Relation of the Tariff to Wages.* A Simple Catechism for those who desire to understand this Matter. By David A. Wells. New York: G. P. Putnam's Sons. [Questions of the Day, No. 54.] pp. 45.

(6) *Tariff and Wages.* By George W. Elliott. Buffalo: Moulton, Wenborne & Co. pp. 112.

(7) *The Home Market and the Federal Surplus.* By Carman F. Randolph. New York. pp. 63.

(8) *True or False Finance: The Issue of* 1888. By a Tax-payer. New York: G. P. Putnam's Sons. [Questions of the Day, No. 55.] pp. 41.

(9) *The National Revenues.* A Collection of Papers by American Economists. Edited by Albert Shaw. Chicago: A. C. McClurg & Co. pp. 245.

be looked for in a publication of this sort. Mr. Thompson, indeed, warns the reader in his preface that he means to provide no very unusual information; and his historical matter is derived mainly from the standard histories and occasional dippings into the Congressional debates. There is a curious lack of proportion in the narrative, such as it is. The first tariff act and the debates of 1789 get half a dozen chapters, made up largely of quotations from various statesmen, and the events of 1832–33 get nearly a dozen; yet there is not a word on the history of tariff legislation after 1860. Of investigation of economic history there is no trace. In fact, there is an absence of specific information so marked that it might be supposed to be intentional. The rate of duty on hardly any article in any tariff act could be learned from this history of the tariff. Mr. Thompson's bias is openly, almost naïvely, for protection; and England's hostile policy, the Cobden Club, the home market, the constitutional question, and other matters not of an historical sort, are given much space in the volume. The charts seem to have been thrown in at a venture, and have nothing to do with the text and little with the general subject.

Not unlike Mr. Thompson's book is Mr. Henry V. Poor's *Twenty-two Years of Protection*, of which the title is a misnomer. Mr. Poor begins with Sir Josiah Child and the colonial system, gives some information (which has a very familiar ring) on Parliamentary regulation of colonial industries, plods on through our tariff history, and finally has only a quarter of his space left for the period since 1865. There is no pretence of original investigation. The temper of the volume may be inferred from the following extract, which introduces the history of tariff legislation during and after the civil war,— or, as Mr. Poor puts it, "the Restoration of the Work of the Fathers." Mr. Poor tells us that "no sooner did the North, by the election of Mr. Lincoln and the secession of great numbers of Southern members of Congress, become a nation free to act on her own impulses, than her first work was to restore the work of the Fathers,— the Tariff, Banks, Internal Improvements! How grateful to breathe once more the free air of the early Republic; again to invoke the exam-

ple and companionship of Washington, Hamilton, Madison, Monroe," and so on! The latter part of the compilation is devoted chiefly to statistics on railroads, on the production of iron, savings banks, wages, and the like. All the progress of the country in these various matters is ascribed, in good campaign fashion, to the protective tariff. An appendix gives several statistical tables, chiefly on railroads, which are reprinted from the author's *Railroad Manual*, and may be of service for other than tariff discussion to such as have not the *Manual* at hand.

Mr. Taylor's *Is Protection a Benefit?* has a more scholarly tone and a less sketchy and haphazard character than the books just noticed; but, like them, it is a plea, and not an investigation. Mr. Taylor is an uncompromising free trader, can see nothing that is of weight in the arguments of the other side, and, in his eagerness to meet them, does not keep clear of slips and inconsistencies of his own. In some places, he reasons as if duties brought permanent high profits in the protected industries; yet, elsewhere, he says that any excessive profits are likely soon to disappear. The effect of duties on wages is not treated with much depth, and we meet once more with that unsatisfactory attempt to refute the tariff-and-wages argument which rests on the alleged fact that wages are lower in protected than in unprotected industries. The effect of duties on the prices of the protected articles is discussed with reason and temper, yet, after all, with no hint that this line of reasoning is only a statement in another form of the familiar young industries argument. We have, again, too much of that sweeping sort of statement which declares protection to be "robbery," and says that "gravitation governs the material world no more harmoniously than the natural laws of trade govern all exchange." Loose talk of this kind has often stood in the way of general acceptance of liberal principles as to international trade.

It is but fair to add that Mr. Taylor's book contains good brief sketches of tariff history in England and in this country, and shows good acquaintance with the facts of the present situation. Even here, however, we miss thorough discussion of particular duties or particular industries, and meet with

occasional slips; as, for instance, in the assertion that all pig iron made in the United States is raised in price by the full amount of the duty. Mr. Taylor's style is fluent, vigorous, and clear, and his book may be commended for what it sets out to be,—a plea. It is a well-arranged statement of about all the popular arguments that have been advanced on his side of the question.

Mr. Allen, in *The Tariff and its Evils*, discusses the subject in the same temper and from the same point of view as Mr. Taylor, but less completely and, on the whole, less successfully. "The true — the only — function of government," we are told, "when narrowed down, is merely an intelligent dealing with natural conditions." This may be so, or may not. Much depends on what "natural" means; but the principle of international free trade gets little support from such uncertain generalizations. When Mr. Allen comes closer to the subject, his discussion becomes more solid, though still, as to history and facts, rather inconclusive. There are remarks which are just, if not fresh, on the advantages of commerce and the benefits arising from free exchange of the products of a division of labor. But we find once again the familiar comparison of the growth of the United States in the decades 1850–60 and 1870–80, and the attempt to prove that greater prosperity existed during the former period, and was due to lower duties. In all such discussions, the data are insufficient; census returns, though "official," are generally incomplete, and at best are far from telling the whole story; even the most accurate of figures, if we had them, could not tell us what part the tariff played in promoting or retarding progress. Mr. Allen's attempt to contrast the accumulation of wealth in England and in the United States is of the same unsatisfactory sort. The best chapters of his book are concerned with the shipping question, which is given disproportionate space, but is handled with vigor and knowledge.

Among the briefer publications, Mr. Wells's catechism on *The Relation of the Tariff to Wages* sticks close to the facts of the present situation. Reasoning from the natural laws of trade is let alone, and the main stress is laid on the proposition that higher wages in the United States are a result of greater

productiveness of labor. Mr. Wells's wide knowledge of economic history and facts enables him to supply interesting and effective illustrations on this fundamental doctrine. The form of a catechism, with its alternate questions and answers, may be useful for popular discussion, but becomes wearisome after a few pages.

Mr. Elliott, whose *Tariff and Wages* is also in the form of question and answer, seems to feel this difficulty. He begins with a lively conversation between a theoretical son, who is a free trader, and a practical father, in whom we discover our old friend, the theoretical free trader but practical protectionist. The father soon emancipates himself from the trammels of the conversational form, and finds it best to expound his conclusions by dropping into monologue. Mr. Elliott, like Mr. Wells, makes the question of tariff and wages a question of production, and therein undoubtedly is on the right track. Unlike Mr. Wells, he reasons entirely on general principles, uses fictitious illustrations, and makes no attempt to apply his principles to the facts of our time. In temper and in matter, Mr. Elliott rises above most of the advocates of protection. He shows some acquaintance with economic literature, has his say about Cairnes and Walker anent the wages-fund, and at the close digresses into a discussion of profit-sharing, trade-unions, and social subjects generally. Throughout, he is fair-minded and intelligent, yet hardly offers anything of value to the trained economist.

Mr. Randolph's paper on *The Home Market and the Federal Surplus*, a reprint of contributions to the *Political Science Quarterly* and the New York *Evening Post*, is scholarly in tone and reasoning, and applies to some of the current arguments for protective duties the tests of the classic reasoning on international trade. The anonymous pamphlet on *True or False Finance* is, as its full title indicates, a discussion of the issues of 1888, in brief and rather scrappy paragraphs, which might have appeared with effect as newspaper articles, but which seem hardly worth bringing together in more permanent form.

Quite different from any of the preceding is the collection of papers which Mr. Shaw has edited, on *The National Rev-*

enues. The editor, in his introductory remarks, tells us that his plan was to secure papers which should indicate what was the drift of opinion on the present situation among American economists; and he has emphasized the representative character of the collection by giving some account of the contributors, saying an even word of praise for each. The papers vary in character and in value more than the editor's courtesy could permit him to hint. Some are a little in the nature of a confession of faith, like those of Professor Ely and Chancellor Manott; some are on particular points, as Professor Hadley's vigorous and clear-headed essay on steamship subsidies, Professor Adams's able discussion of the surplus, and Professor Bemis's specific plan of tariff reduction; while Professor Folwell and Commissioner Wright contribute essays in general theory, with no attempt at specific application. On the whole, there is perhaps too much of the flavor of the lengthened editorial article,— a defect, if such it be, which resulted inevitably from the limitations of space. But the treatment is, almost without exception, on a good level; and the volume may be commended to that not inconsiderable class of intelligent readers who prefer a series of essays to a continuous and connected discussion. The debating society or village club would find in it excellent material for their purposes. Original contributions to our understanding of principles or even to our knowledge of the present situation, it was not the object of the editor to bring out.

Indeed, the most noteworthy feature in the whole list of publications is the absence of attempts to investigate carefully and without bias the practical working of protective duties. The questions of general theory have been pretty well threshed out. We can hardly look for much addition to our knowledge on this score, and certainly have had none for many years. But the history and present condition of protected and unprotected industries offer a rich field to the investigator, and one in which no great amount of work of substantial value has yet been done. It is surprising, when we consider the attention the public has given to these subjects, how slight has been the amount of thorough and impartial study of our own industrial phenomena. T.

ANTI-CHINESE LEGISLATION IN AUSTRALASIA.

In 1855, a law was passed in Victoria, designated No. 39, by which the master of any ship carrying any male adult natives of China or its dependencies, or of any islands in the Chinese seas, or any persons born of Chinese parents, had to pay, on arrival at any port in Victoria, 10*l.* for each such person.* If any ship carrying any Chinese, as above defined, arrived at any port in Victoria with a greater proportion of passengers (apparently of any sort) than one to every ten tons of the ship's burden, the owner, charterer, or master was made liable on conviction to a penalty not exceeding 10*l.* for each passenger so carried in excess; also, power was given to the Governor, with the advice of the Executive Council, to levy such a sum from every Chinese, as above defined, as might be necessary for the payment of the officers employed in carrying out the act.[1] By No. 41 of 1857 of Victoria,[2] every Chinese residing in Victoria had to obtain a license, costing 1*l.*, and to be renewed every two months on payment of 1*l.* No. 80 of 1859[3] repealed this provision and also the act of 1855, but re-enacted the latter in substance, with the addition of a 40*l.* entrance-fee for Chinese arriving otherwise than by ship, and substituted a 4*l.* annual residence-fee for the provisions of the act of 1857. By No. 132 of 1862,[3] the provisions relating to residence-fees were repealed; and residence-fees do not again appear in the anti-Chinese legislation of Australasia.

Acts similar to that of 1855 in Victoria were passed by South Australia in 1857, No. 3,[4] and by New South Wales in 1861, No. 3,[5] — the latter also providing for an entrance-fee of 10*l.* for Chinese coming in otherwise than by sea, and enacting that no letters of naturalization should be issued to Chinese,— but these were repealed in 1861 and 1867 respectively. In Victoria, entrance-fees were suspended for two years by No.

*See p. 71 of the Parliamentary blue-book printed in July, 1888, entitled *Correspondence relating to Chinese Immigration into the Australasian Colonies, with a Return of Acts passed by the Legislatures of those Colonies and of Canada and British Columbia on the Subject.* All subsequent references are to pages of that book.

[1] p. 71. [2] pp. 71, 72. [3] p. 72. [4] p. 75. [5] p. 77.

170 of 1863,[1] reimposed by No. 200 of 1864,[1] and abolished by No. 259 of 1865.[2] No. 259 of 1865, or "The Chinese Immigrants' Statute, 1865," enacted, in the place of all previous anti-Chinese legislation, that the Governor in Council should have power to make such rules and regulations as may be deemed necessary for the registration of Chinese (defined as in 1855, except so as to exclude any child of British parents, wherever born), for their removal from whatever place they are in, for protecting them and adjusting their disputes, "and generally for [their] management and good government." Any one wilfully infringing any such rule or regulation was made liable to a penalty not exceeding 5*l.* This act, which is still law in Victoria if not repealed within six months, is the only instance in Australasian anti-Chinese legislation of similar powers being put in the hands of the Governor. Section 12 of this act provides that "no [Chinese] . . . shall be entitled to vote at the election of members for any mining board."

The last anti-Chinese act passed in Victoria is "The Chinese Act, 1881,"[3] assented to December 24 of that year. Its principal features are, like those of the original act of 1855, a limitation of the number of Chinese a vessel can carry and an entrance-fee. As most of the other Australasian Colonies passed acts very much like it, I shall give its provisions in some detail. The second section provides that for every Chinaman in excess of the proportion of one to every hundred tons of the ship's burden, brought into any port in Victoria, the owner, master, or charterer of the vessel bringing him shall be liable to a penalty of 100*l.* Section 3 imposes an entrance-fee of 10*l.* to be paid by the master of the vessel for every Chinese before he is permitted to land, the Chinese receiving a certificate of the payment from the officer to whom payment is made, and lays a penalty on the master of 50*l.* plus the entrance-fee for every Chinese landing or escaping from the vessel before such payment, or before the master delivers to the proper officer a list of the Chinese on board according to a provision of the Statute of 1865. Section 4 imposes a penalty of 10*l.*, or, in default of payment, imprisonment for twelve months or till the fine is paid, upon any Chinese entering the

[1] p. 72. [2] pp. 72, 73. [3] pp. 73, 75.

colony by sea, or attempting to do so, without payment of the entrance-fee. Sections 5 and 7 exempt British subjects, and crews in the performance of their duties in connection with their vessels, from the operation of the act; and Section 6 exempts Chinese duly accredited to the colony by the government of China, or sent by the English government on any special mission, from having to pay the entrance-fee. Section 8 prevents the evasion of the act by transshipment of Chinese from one vessel to another. Section 9 puts on the defendant in any proceeding under the act the burden of proving that he is exempt from its operation. Sections 11, 12, and 13 enact that no Chinese (notwithstanding they may be rate-payers) shall vote at any municipal or parliamentary election unless they are British subjects, and that their names shall be omitted from the voting-lists unless they are known to the officials to be British subjects or shall be proved to be such.

Acts similar to "The Chinese Act of 1881" of Victoria, of which I have just given an abstract, were passed by the other Australasian Colonies, as follows: —

Queensland, August 20, 1877, No. 8,[1] and March 10, 1884, No. 13;[2] South Australia, November 18, 1881, No. 213[3] (not applicable to the northern territory); New South Wales, December 6, 1881, No. 11;[4] New Zealand, 1881, No. 47;[5] Western Australia, July 28, 1886, No. 13;[6] Tasmania, November 7, 1887, No. 9.[7] The Chinese question has never become a pressing one in Fiji.*

These acts give a variety of definitions of "Chinese," but practically they are all nearly equivalent to that adopted in New South Wales,[8]— "any person of the Chinese race." The entrance-fee is everywhere fixed at 10*l.*, except in Queensland, where it is 30*l.*[9] The Statute of 1881 in Queensland provided for the refunding of the entrance-fee on certain conditions,[10] but that provision was repealed in 1884.[11] New South Wales[12] and

* p. 33. Sir J. B. Thurston writes from the Government House, Fiji, April 11, 1888, that "there are very few Chinese subjects in this colony, not exceeding, perhaps, thirty in all. They are chiefly occupied as small traders and gardeners. Their conduct is, on the whole, inoffensive, and no exceptional legislation whatever exists affecting them."

[1] p. 80. [2] p. 81. [3] p. 76. [4] p. 78. [5] p. 86. [6] p. 84.
[7] p. 82. [8] p. 78. [9] p. 82. [10] p. 81, § 7. [11] p. 81, § 2. [12] p. 78.

Tasmania,[1] like Victoria, allow only one Chinaman to every one hundred tons of a vessel's burden; West Australia[2] and Queensland[3] allow one to every fifty tons; and the rest, one to every ten tons.[4] All impose a penalty of not over 200*l.* upon the master if he does not produce a list and, except in Victoria, a brief description of all the Chinese on board.[4] In all these acts, it is stated that the fine imposed on a Chinaman for entering or attempting to enter without paying his entrance-fee shall be *in addition to* the entrance-fee, except in the case of Victoria.[5] *Quaere* how the Victoria Act is construed in that respect. The acts of Queensland,[6] New South Wales,[7] New Zealand,[8] Western Australia,[9] and Tasmania,[10] make provision for the seizing of the vessel, on default of the master in allowing illegal landing of Chinese, and for holding her, with power to sell under certain conditions.* In New Zealand and Tasmania, as in Victoria, there is no entrance-fee if the Chinaman comes otherwise than by vessel. In the two former cases, this omission can make no great difference; but it is singular in the case of Victoria, especially when we remember that the Statute of 1859 *supra*, in Victoria, put the fee for such entrance at 40*l.*[11]

All the colonies have provisions for a summary enforcement of the penalties imposed by these acts,[12] the magistrates before whom the case is brought deciding "upon their own view and judgment"[13] whether the defendant is a Chinaman or not. All except Victoria give certificates of temporary exemption from the operation of the acts to Chinese leaving the colony

* In Queensland (p. 80), if the master neglects to pay the entrance-fee, or unlawfully lands, or permits to land, any Chinese, "in addition [to a penalty on the master], the vessel shall be forfeited, and may be seized, condemned, and disposed of in like manner as ships forfeited for a breach of any law relating to the customs." So also in Tasmania (p. 83) and New Zealand (p. 87). In New South Wales, it is lawful that any vessel, the master of which is held by the Treasurer of the colony "to have committed an offence or be a defaulter" under the Chinese act, should be detained until the master gives bond with sureties for the payment of any penalty and any other sums found due from him; and, if he does not give bond, nor pay when convicted, the vessel may be seized, and condemned or forfeited as for a breach of the customs laws. Western Australia has similar provisions, but neither Victoria nor South Australia.

[1] p. 82. [2] p. 84. [3] pp. 76, 82. [4] pp. 73, 76, 78, 80, 82, 84, 86.
[5] pp. 77, 78, 81, 83, 85, 87. [6] p. 80. [7] p. 79. [8] p. 86. [9] pp. 84, 85. [10] p. 83.
[11] p. 72. [12] pp. 73, 77, 79, 82, 84, 86, 87. [13] pp. 73, 77, 79, 81, 83, 85, 87.

for a time specified in the certificate.[1] Western Australia exempts from the operation of her anti-Chinese act all laborers under a previously written agreement with their employers,[2] — an exemption which compares curiously with our laws against the importation of contract labor. South Australia[3] and Tasmania[4] make it a condition of the entrance of a Chinaman into their territory that he shall have been vaccinated. The restrictions on the right to vote, which occur in Sections 11, 12, and 13 of the "Chinese Act of 1881," and in Section 10 of the act of 1865, in Victoria, are not found in the other acts I have cited, though there are similar provisions in the anti-Chinese act passed in New Zealand this year.[5] It may be that the general laws of the other colonies on the subject of voting provide similar restrictions.[6] I have found no other instance of the law of New South Wales of 1861,[7] repealed in 1867, that no letters of naturalization shall be issued to Chinese. There was a law in Queensland, in 1877,[8] that Asiatic and African aliens should have to pay an "increased fee for Miners' Rights and Business Licenses issued under the Gold Fields Act." This law was repealed in 1878, when it was enacted instead "that Chinese should not be allowed to mine on the Gold Fields until after the expiration of three years from the date of their first proclamation, unless the gold field had been discovered by an Asiatic or African alien."[9] There are differences between the acts in the different colonies, in matters of detail and in the amounts of the pecuniary penalties imposed; but I have touched upon all the important points.

In 1888, the anti-Chinese legislation of Australia was made geographically complete by the passage, on March 1, by South Australia, of a bill imposing an entrance-fee of 10*l.* upon all Chinese landing in the northern territory, and a quarantine of twenty-one days upon all vessels arriving in that territory from Chinese ports.[10]

The report received last spring of a treaty concluded between the United States and China by which the Chinese were to be kept out of this country increased the anti-Chinese

[1] pp. 77, 79, 81, 83, 85, 87. [2] p. 39, No. 72; p. 40, Enclosures 1 and 2; p. 85.
[3] p. 83. [4] p. 77. [5] Cited more fully below. [6] p. 34, Enclosure in No. 64.
[7] p. 77. [8] p. 14, Enclosure in No. 22. [9] p. 15. [10] p. 3, No. 5.

feeling in Australasia.[1] The excitement in Sydney ran so high that the authorities overstepped the law[2] in preventing the landing of the Chinese on board the steamer "Afghan" for fear of a riot.[3] In New Zealand and New South Wales, acts were passed (and subsequently assented to)[4] putting still closer restrictions on Chinese immigration than had formerly existed in those colonies. "The Chinese Immigrants' Amendment Act, 1888," of New Zealand,[5] lowered the number of Chinamen a vessel could carry to one for every one hundred tons[5] (instead of ten), repaired some oversights in the act of 1881, and provided that Chinese should not vote at the "election of a member of a local authority."[6] The New South Wales act of 1888 raised the entrance-fee to 100*l.*, and provided an indemnity for the government in case the Supreme Court should declare the action of the ministers, in not allowing the Chinese on the "Afghan"[7] to land, to be illegal.[8] New Zealand also republished proclamations declaring China, Hong Kong, Sumatra, Java, Mauritius,[9] and the Islands of the Eastern Archipelago, to be "infected places" under "The Public Health Act, 1876,"[10] giving notice[11] that strict quarantine would be enforced against all vessels from, or having touched at, any of those places, or having received any person or thing whatsoever from or out of any vessel coming from or having touched at any of those places. The motive for republishing these proclamations was the same as that which caused the act to be passed,[12] — simply to keep out the Chinese.

The most interesting effect of the anti-Chinese excitement was a conference of delegates from all the Australasian Colonies except New Zealand and Fiji, upon the subject of Chinese immigration, held in Sydney on the 11th, 12th, and 13th of last June,[13] in which the opinion was unanimous "that the

[1] p. 2, No. 3; p. 13, No. 21; p. 11, No. 14 A; p. 21, No. 39 and Enclosure, and No. 37; p. 32, No. 61; p. 42, No. 76 A; p. 52, Enclosure in No. 87; p. 49, No. 87; and other letters and telegrams.

[2] p. 27, No. 48. [3] p. 26, No. 45. Cf. p. 27, Nos. 46, 47; and cf. also p. 51, No. 87.

[4] p. 31, No. 58; p. 41, No. 73; p. 30, No. 54. [5] p. 53. [6] p. 54.

[7] For short history of the Afghan matter, see p. 46, No. 83, and p. 38, No. 71.

[8] p. 26, No. 45. [9] Since declared clean. [10] pp. 55, 56. [11] p. 55.

[12] p. 51, No. 87. [13] p. 43, No. 78, gives a report of the conference.

desired restriction can be best secured through the diplomatic action of the Imperial Government and by uniform Australasian legislation." There was a unanimous resolve "to consider a joint representation to the Imperial Government for the purpose of obtaining the desired diplomatic action"; but it was found impracticable[1] to adopt the suggestion made by the Imperial Government[2] that the restriction imposed should be of a general nature, so as not to offend the Chinese and interfere with diplomatic action. The advice given by the Imperial Government that anti-Chinese legislation should be suspended pending the negotiation[3] was not followed, the conference, with the exception of Tasmania and Western Australia, being of opinion that the desired uniform Australasian legislation should include a limitation of one Chinese to every five hundred tons of a vessel's burden,[4] that Chinese should not be allowed to pass from one colony to another without the consent of the latter,[4] and that the entrance-fee should be abolished.[5] It was understood that, if the draft bill should be adopted by two other colonies, New South Wales would make its legislation substantially conform to it, all the colonies reserving the right to make variations in matters of detail;[6] but in the mean time New South Wales kept on, and passed the bill I have mentioned above, on June 15.[7]

On June 22, Lord Salisbury, at the conclusion of a letter[8] admirably summing up the situation, wrote to Sir J. Walsham, "I have to instruct you to place yourself without delay in communication with the Tsung-li Tamên, and urge upon them . . . that . . . the Chinese Government should adopt a course similar to that which they followed in the case of the United States, and enter into a convention with Her Majesty's Government to the effect indicated in the enclosed Resolutions of the Conference held at Sydney."

JOSEPH LEE.

[1] Cf. p. 41, No. 75. [2] p. 35, No. 69. [3] p. 43, No. 77. [4] p. 48.
[5] p. 49. [6] p. 45, No. 80. [7] p. 45, No. 81. [8] p. 49, No. 85.

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APPENDIX.

ITALIAN FINANCES FROM 1860 TO 1884.*

BY ALANSON BIGELOW HOUGHTON.

THE last quarter-century has seen three great nations — the United States, France, and Italy — both suspend and resume specie payments. The conditions under which each of these countries labored at the time of suspension, their history during the term of the forced currency, and finally the means employed by each to gain a sound financial footing once again, are, from the economic stand-point, of almost equal importance. Yet, while the cases of the two former have been carefully studied and presented, that of Italy has been left by English and American writers practically untouched. The present article is an endeavor to lay before the reader a brief sketch of Italy's financial development since the beginning of the new kingdom, laying special stress on the suspension of specie payments in 1866 and on the resumption seventeen years later, in 1883. It falls naturally into two parts. In the first, after a brief examination of the economic conditions under which the new kingdom of Italy began its existence, an effort is made to present Italy's situation at the time of suspension and to discover in how far, broadly speaking, a forced paper was a necessity. In the second part, a review is first made of Italy's progress from 1866 to 1880;

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and this is followed by a setting forth of the various measures and means by which, in 1883, the resumption was finally accomplished.

I.

a. DOWN TO 1866.

The kingdom of Italy, covering the whole peninsula except that part under the temporal dominion of the pope and the provinces held by Austria, was proclaimed by law on March 17, 1861. The financial unification, however, was not accomplished until later, when various laws — among them that of August 14, 1862, establishing a Court of Accounts, and that of August 24, 1862, providing for a single monetary system — finally brought the finances into manageable form.

The general condition of Italy at the time of her political consolidation was backward. Her national economic life did not really begin until after 1861; and not until the occupation of Rome in 1870 did political affairs fall finally into the background. Under the administration of the little autocratic governments, agriculture had flourished in a way, but this was all. During the first half of the century, commerce was little more than local. Tolls and duties surrounded each of the many provinces, and served effectually to check any growing commercial activity. The means of communication between the different States, and even within them, were scanty and bad. Lack of confidence in the stability of the governments or of the laws discouraged all commercial undertakings and even the spirit of industrial enterprise seemed wanting. Trade was looked upon as something more or less odious, especially in Southern Italy, where commerce was practically a closed way to the middle classes; and this had its natural effect in crowding the already overcrowded ranks of the "learned" professions.

Later, when the spirit of modern enterprise began to force its way into Italy, its progress was very slow. At the date of the union, not a single State, if we except Piedmont, had made any preparation to meet the changes which the industrial revolution in Europe and America had brought about. Piedmont, it is true, had looked to the future and paid some heed

to the changes going on around her; but, on the other hand, her financial condition was by far the worst among the Italian States. The others had merely drifted along. Their budgets * were necessarily kept within very moderate limits by their small receipts and the undeveloped condition of credit. In 1860, the total savings † in the savings banks amounted to but 157 mil. In all Italy, only four banks ‡ had the power of emitting notes payable at sight to the bearer,—one at Turin, one in Florence, another in Parma, and a fourth in Bologna. Naples and Sicily, indeed, had each a note-issuing bank; but these, like the old Bank of Hamburg, merely issued receipts of deposit, which passed from hand to hand when indorsed. As for manufacturing industries, the few that existed were small and badly organized; and capital was shy of embarking in them.

The unification, however, began a new era.§ A general tariff was laid, the vexatious tolls between the different States were abolished, numerous inequalities of taxation and restrictions upon trade were done away with, and a much needed system of internal improvements was entered upon. But every kind of difficulty ‖ lay in the way, and the work had to go on slowly. The sources of revenue differed in most of the provinces; and, where any were common to all, they were based on different proportions in each. The ground tax,¶ for instance, varied between a minimum of 9 centimes per lira of taxable revenue in Tuscany and a maximum of 19.75 centimes in the Lombard provinces.** Even the multiplicity of systems of money continued, long after their legal abolition, to produce some degree of confusion.

In addition to these difficulties of organization, the new

* *Journal des Économistes*, March, 1884, p. 264. It is curious to remark, so accustomed had the Italians grown to these small expenditures and receipts, that a feeling of surprise and indignation was aroused when, after the unification, it was found that bringing the seven budgets together into one did not decrease the expenditures, but that, on the contrary, a great State had burdens which a smaller one escaped. See also H. v. Treitschke's *Historische und Politische Aufsätze*, Leipzig, 1886, vol. ii. p. 387.

† *Annuario Statistico Italiano*, 1878, Parte II., p. 108.

‡ Cf. C. Baer's *La Question des Banques*, Turin, 1864, pp. 76, 77.

§ *Annuario*, 1862, p. 7. ‖ *Ibid.*, p. 8 *et seq.* ¶ *Ibid.*, p. 20.

** Compare Sachs, *L'Italie*, and Parieu, *Traité des Impôts*, i. pp. 207–209.

kingdom was at once plunged up to its ears in debt. This debt was of two kinds. In the first place, the government had to assume all the debts of its predecessors, taking upon itself the sum total of the obligations which had been contracted by the several parts of the peninsula up to the time of their annexation. This assumption was a fruitful source of trouble, since there was great disparity in the comparative weight of the debts of the different provinces. But by a law* of the 18th of June, 1861, promulgated August 4, this debt† was assumed and unified, creating, when enrolled in the Great Book of the Debt,‡ a total of 111.6 mil. of *rentes*, representing a nominal capital of 2,241 mil. lire. In the second place, a still heavier burden had to be assumed in the establishment of primary schools, in the construction of means of communication,— such as roads, bridges, railroads, telegraphs,— and of certain public works, and in the securing of other necessary instruments of modern civilization. Throughout the entire southern part of Italy, in the papal regions, and in a considerable part of the north, the means of communication were extremely limited. A system of railroads bound together Venice, Milan, Turin, and Bologna, and there were three short lines to the south between Florence and Leghorn, between Rome and Civita Vecchia, and between Naples and some neighboring towns; but, in all,§ in 1859, these made a total of only about 2,000 kilometres.

In 1860, each province had its own budget.‖ In 1861, these budgets had been reduced to two,— that of the new kingdom and that of Sicily and Naples. Sicily and the Neapolitan provinces had each a financial bureau, situated in Palermo and in Naples respectively, almost independent of the Minister of Finance. The finances of these two kingdoms were practically under the control of the provisional government; and

* *Bulletino Ufficiale della Ragioneria Generale*, etc., 1883, *Luglio — Dicembre*, pp. 677–699. Cf. V. Ferraris, *Le Leggi sul Debito Pubblico Italiano*, Turin, 1886, pp. 508–532.

† *Annuario*, 1862, p. 28. ‡ *Bullettino Ufficiale*, etc., pp. 669–677.

§ Isidore Sachs, *L'Italie: ses Finances et son Développement Économique*, Paris, 1886, p. 957. Sardinia, 850 kilometres; Tuscany, 257; Lombardy-Venice, 522; Pontifical States, 101; Two Sicilies, 99. Total length, 1,829 kilometres.

‖ *Annuario*, 1862, pp. 9–13.

they formed, in reality, separate financial centres. But in October, 1861, the lieutenancy of Naples was suppressed, and in January, 1862, that of Sicily; and thus the budgets of both Naples and Sicily were incorporated into the general budget for the kingdom for 1862. The year 1862, therefore, marks the formal beginning of the modern financial history of Italy.

The budgets just previous to 1862 show the genesis of the budget for the entire kingdom. Beginning with the year 1860, the preliminary estimate * made the receipts † 547.6 mil., the expenditures 608.5 mil., and a deficit of 60.9 mil. lire. This result, however, was more cheerful than accurate. The complete financial situation ‡ on the 31st of December, 1860, was: receipts, 456 mil.; expenditures, 830 mil.; deficit, 374 mil.; and, adding to this deficit the deficits left over from preceding years, which amounted to 43 mil., there was a total deficit of 417 mil. This was covered by an appeal to public credit. The old Piedmontese provinces made two loans, of 100 mil. and of 150 mil.; Emilia made a loan of 10 mil.; Tuscany made an emission of 1.5 mil. in 3 per cent. *rentes;* and new *rentes* were created by Naples and Sicily. In all, this amounted to 377 mil. A further sum of 15 mil. was secured by temporary advances, which brought the total up to 392 mil.; and this sum, applied to the budget, left a deficit for 1860 of only 25 mil.

For the year 1861, as has been said, there were two budgets, — one for the new kingdom and one for Sicily and the Neapolitan provinces. The preliminary estimates,§ taking both together, set the receipts at 477.6 mil., the expenditures 853.7 mil., and the deficit 376.1 mil. The actual deficit, however, proved to be much larger. The final figures ‖ were: receipts, 374 mil. effective and 94 mil. non-effective, making the total 468 mil.; expenditures, 636 mil. and yet remaining 337 mil.; total, 973 mil. The real deficit, then, was 505 mil. To meet this, recourse was had for the first time to direct borrowing by the new kingdom. A loan of 500 mil. was voted by the

* *Annuario*, 1862, p. 368.

† We shall always include under "receipts" both ordinary and extraordinary receipts, and under "expenditures" both ordinary and extraordinary expenditure.

‡ *Annuario*, 1862, pp. 368, 369. § *Ibid.*, p. 372. ‖ *Ibid.*

Chambers; and in July, 1861, the emission was made in five per cents. at the rate of 70½, the credit of the new kingdom calling out a far larger subscription than was necessary. Bringing the proceeds of this loan into the budget, together with certain Sicilian and Neapolitan *rentes*,* the receipts from loan and *rentes* in 1861 were 345 mil.; and there still remained due on the same 203 mil., or a total of 548 mil. Deducting from this amount the total deficit for the year, 505 mil., and the 15 mil. of advances secured by the State in the preceding year, a nominal surplus of 28 mil. lire was left.

The reasons for so great a deficiency lay on the surface of affairs. In the early part of the year, Francis II. was still fighting, and did not capitulate at Gaëta until the middle of February. Later, great efforts had to be made to put down the brigand bands in Calabria and the Abruzzi. And, finally, the receipts were diminished because the government, for purposes of conciliation, renounced its claims to certain taxes.

We come now to the formal opening of the budgets for the entire kingdom. Recapitulating and, for convenience, bringing the figures † down to 1866, we have the totals, in millions of lire: —

	Receipts.	*Expenditures.*	*Deficits.*
1860	456	830	374
1861	468	973	505
1862	480	927	446
1863	524	906	382
1864	576	944	368
1865	646	916	270
Total,	3,150	5,496	2,345
Average,	525	916	391

The preliminary estimates ‡ for 1862 put the receipts at 531 mil. and the expenditures at 840 mil., and showed a deficit of 309 mil. In March, however, a change of ministers took place. A new budget became necessary, and Sella, the new Minister of Finance, presented the revised estimates § in June. According to his plan, the expenses were raised 127 mil.,

* *Annuario*, 1862, p. 372.

† *Annuario*, 1884, pp. 1054–1068. A convenient summarized statement of the budgets from 1862 to 1882 may here be found. Special reference is made to Sachs's *L'Italie*, etc., pp. 1–276; Cucheval-Clarigny's *Les Finances de l'Italie*, Paris, 1886, pp. 1–182; and R. v. Kaufmann's *Das Budget des Königreichs Italiens*, in *Finanz-Archiv*, iii., 1886.

‡ *Annuario*, 1862, p. 324. § *Ibid.*, pp. 317–342.

owing largely to increased military and naval expenditures, while the receipts were but slightly increased, so that, all in all, the minister was forced to add 124 mil. to the deficit of 309 mil. in the former budget, which gave a total deficit of 433 mil. Sella proposed * to meet this as follows: About 50 mil. from taxes and some Sicilian *rentes* were at his disposal, to start with. Certain railroads in course of construction were to be conveyed to private parties, these parties being secured by a guarantee; and a privilege of canal construction was to be ceded to a company which should buy for 20 mil. the existing canals. These measures would bring the deficit to 325 mil., and an emission of 100 mil. of treasury bonds would reduce it still further to 225 mil. This sum could be raised by the sale of those domanial lands which served no public use, and of those church estates which had passed to the domain; only, in return for these latter, a revenue in *rentes*, equal to their yearly income, would have to be given the ecclesiastical bureau, in whose charge they were. Finally, the minister asked to be allowed to sell 100 mil. additional treasury bonds in anticipation of the sale of the domanial lands. These were the leading provisions of the plan, and they were finally adopted. If we add that an actual deficit of about 320 mil. was brought over from 1861, of which we have taken no account, it is evident that the year 1862 left the finances in a state where bankruptcy seemed almost at the door.

Sella was succeeded by Minghetti in December, 1862. Minghetti was the financial optimist of his day; but, in presenting his estimates on the 14th of February, 1863, he was forced to declare that the financial situation dominated everything else, and that even political questions must be subordinated to it. In the estimates † for 1863, the receipts stood at 608 mil. and the expenditures at 962 mil., and a deficit was shown of 354 mil. To this sum, however, must be added, first the interest on a new loan ‡ of 700 mil., which the minister proposed to make, bringing the amount up to 400 mil., and then the

* *Annuario*, 1862, pp. 330–342. † *Ibid.*, 1863, pp. 387–417.

‡ *Le Crédit Public en Italie et l'Emprunt de* 1863. Par E. de Choisy. Turin, 1863.

deficits left over from 1862, some 375 mil., the total deficit thus amounting to 775 mil. In spite of this appalling amount, Minghetti was hopeful, and brought forward a scheme for doing away with the deficits entirely after four years. His plan rested on a distinction between the ordinary and extraordinary budgets. The extraordinary deficits were not to be allowed to exceed 100 mil. per year. The ordinary deficits were to be reduced, in 1863 to 220 mil., in 1864 to 165 mil., in 1865 to 110 mil., in 1866 to 65 mil., so that, at the same rate of progress, in 1867 a balance would be obtained. The ground was cleared for this movement by reforms, which cut down the expenses 100 mil. for the year, and raised the taxes so as to increase the receipts 115 mil. If these proposals were accepted, affairs would stand as follows: deficit to January 1, 1863, 375 mil.; deficits from 1863 to 1866, 550 mil.; extraordinary deficits, 400 mil.; or, in all, 1,325 mil. This sum was to be met, first of all, by a loan of 700 mil. Then, by the sale of the domanial lands, a sum of 218 mil. and, from the church estates, 222 mil. more could be raised. The remainder would be secured by increasing the amount of treasury bonds in circulation from 150 mil. to 300 mil. This would give a total of about 1,300 mil., and practically ensure the balance so long sought for. Minghetti's optimism proved contagious, the plan was adopted, and the loan * was decreed. The first emission of 500 mil. at five per cent., at a rate of 71, was made in March; and the second emission of 200 mil., at a little better than 68, followed in December. But the very next year was sufficient to overturn this fairylike creation of Minghetti's brain.

When the budget for 1864 was first presented, it showed a deficit of 255 mil., the estimated receipts being 672 mil. and the expenditures 927 mil. But late in the year political changes brought Sella into office again. In November, he presented his estimates,† and declared that the deficit would come, not to 255 mil., but to 316 mil. The taxes had yielded less than estimated, the loan was not thoroughly successful, the sale of the public lands fell short, and certain items of expense had to be increased. The situation demanded heroic

* *Vide* p. 239. † *Annuario*, 1865, pp. 413 *et seq.*

treatment, and received it. An issue of 50 mil. in treasury bonds and an estimated sum in the treasury of 66 mil. from taxes and other sources made 116 mil. This left 200 mil. yet wanting. From the sale of the domanial lands, 40 mil. could be expected. An anticipation of the ground tax for 1865, which was fixed at 121 mil., and a further issue of treasury bonds would make up the balance. Taxes were once more increased. The price of tobacco was raised one-third, and the price of salt was increased 10 lire per 100 kilos. The Crown gave up 3 mil. of its dotation.

But all in vain. To try to fill these dreadful deficits seemed like pouring money into a bottomless hole. When the budget* for 1865 was presented, there was another deficit of 208 mil., the receipts being put at 669 mil., and the expenditures at 817 mil. To this, moreover, had to be added from former deficits left over a sum of 317 mil., which gave a total of 525 mil. Sella faced the dismal prospect boldly. He agreed to bring in a budget for 1866 with a deficit not to exceed 100 mil., and adding this 100 mil. to the deficit for the year gave an aggregate of 625 mil. This sum he proposed to meet by a loan of 425 mil., and by the sale of the State railroads, which would yield 200 mil. more. In addition to these measures, certain changes would still further increase the taxes. The proposals were accepted; and the loan of 425 mil. was duly made at a nominal rate of 66, or, deducting expenses, at 63.44, which, considering the circumstances, was gratifyingly high.

.This brings us down to the beginning of 1866, when affairs finally reached their climax. How great the strain had been one can hardly overestimate. The tax-yields † tell us something of it. These were in 1861 458 mil., in 1862 471 mil., in 1863 511 mil., in 1864 565 mil., and in 1865 637 mil. This shows an increase of 45 per cent., which, when we consider that Italy was by no means rich, is something enormous. We have seen that the new kingdom began its existence with a nominal debt of 2,300 mil., and an annual interest charge of 112 mil. In the years 1860–65 there had been an aggregate deficit of 2,350 mil., and an average yearly deficit of 391 mil.

* *Annuario*, 1865, pp. 451-492.

† *Annuario Statistico Italiano*, 1878, Parte I., pp. 144, 145.

To cover this, loans yielding nearly 1,700 mil. had been contracted; and these, at the market rate, amounted to 2,500 mil. of nominal debt, with 125 mil. annual interest. It was true that the receipts had steadily grown larger, but this was due almost entirely to the increase of the taxes from year to year. And if, on the other hand, there had been a slight though intermittent fall in the expenditures, yet in 1865, when the deficit touched its minimum, it amounted to some 40 per cent. of the gross receipts. Even this unfavorable showing had been reached only by the most strenuous efforts; for, to say nothing of the increase of the taxes, enormous loans had been contracted, and the domains and the State railroads were being sold.

One further point demands our attention before we pass on to consider the events of 1866. The foreign trade during these years exhibited a considerable loss, and one continually greater year by year. The following table* gives a statement of the special commerce; that is to say, of the amount of goods imported for actual consumption, and the amount of domestic goods exported. The figures are in millions of lire:

	Imports.	*Exports.*	*Difference.*
1862	830.0	577.5	252.6
1863	902.2	633.9	268.3
1864	983.8	573.5	410.3
1865	965.2	558.3	406.9
Total,	3,681.2	2,343.2	1,338.2
Average,	920.3	585.8	334.5

We see here an increasing importation and a decreasing exportation. These figures are important as an index of Italy's condition. Italy was now in a position where her budgets exhibited a steady and strong deficit, necessitating continuous borrowing from abroad, and where the foreign trade went directly against her.

The sum † of specie in circulation is supposed to have ranged about 1,000 mil., although, of course, this amount was subject to frequent fluctuations. How, then, were the gold and silver kept from going out of Italy? The answer

* *Annuario Statistico Italiano*, 1878, Parte II., p. 34.

† *Vide Journal des Économistes*, February, 1874, p. 221; Conrad's *Jahrbücher für Nationalökonomie und Statistik*, 1881, pp. 529, 530.

to this lies in the fact of the heavy loans which Italy made during these years, by which specie was continually brought into the country. These loans,* as we have already seen, were: —

Date.	*Rente.*	*Nominal capital.*	*Price of emission.*	*Net product.*
11 October, 1859	6.1 mil.	122.0 mil.	80%	95.1 mil.
12 July, 1860	9.3	186.4	80¼	146.7
17 July, 1861	35.7	714.9	70½	496.9
11 March, 1863	35.7	714.3	71	493.8
13 December, 1863	15.0	300.0	68	197.5
19 January, 1865	.7	14.3	65¼	9.1
11 March, 1865	33.0	660.0	66	448.4

These loans were the real ground of Italy's ability to hold her gold and silver. Still, it is hardly necessary to point out that such a means of continuing on a specie basis could at best be only a temporary affair. Borrowing could not go on forever. And it was evident that, unless the condition of Italy's finances underwent some great change, her credit must soon come to a dangerous crisis.

b. THE SUSPENSION.

Late in 1865, Sella presented the estimates † for the following year. Again there was a deficit. The receipts were estimated at 668 mil., the expenditures at 933 mil., and the deficit at 265 mil. This was to be met in part by stricter economy, which would yield 30 mil., and by additional taxation, which would yield 140 mil. more. The minister undertook to meet the 100 mil. remaining by a decisive move. He proposed the suppression of the religious corporations and the conversion of their patrimonies to the use of the State. The morality of such a measure was decidedly questionable. Even in politics there is left a prejudice against taking somebody else's property merely because it happens to be needed. But the measure would more than supply the sum required, and the State had undeniably fallen into desperate straits. In this form, however, the budget was not definitely acted upon. Sella found himself in difficulty because of the desire to impose the unpopular grist-tax (*macinato*), and was succeeded by Scialoja; and a new budget was brought forward. Scialoja based his estimates ‡ on the former budget, and accepted the

* *Storia della Finanza Italiana dal* 1864 *al* 1868. R. Bonghi. Firenze, 1868.

† *Annuario*, 1866, pp. 463–496. ‡ *Ibid.*, pp. 497–528.

deficit, as before, as 265 mil. To meet this, he proposed to make economies in the War Department — strangely enough in view of after events — amounting to 30 mil. and in the other departments amounting to 25 mil. This would reduce the deficit to 210 mil. By a reorganization of the direct tax, and by the imposition of further taxation, not including the grist-tax, he hoped to bring the deficit down to 85 mil. To cover this latter sum, he repeated Sella's proposition concerning the religious corporations. The plan was sharply attacked, but finally was accepted. Later, towards the end of February and early in March, it became evident, in view of approaching events, that these plans would not be sufficient. Opposition in the Chamber made the ministry weak, and the financial estimates did not yield the hoped for result. In March, there were negotiations for a loan * of 250 mil. between the minister and a number of Italian credit establishments. These agreed at first to float the loan, although there was much popular objection to the arrangement. But in the beginning of April, owing probably to the severity of the crisis then prevailing, notably in England, and to the uncertain outlook, they were compelled to withdraw their offer, and leave the government to its own resources.

The uncertain outlook referred to was, of course, the prospect of war. Early in April, the political horizon began to darken rapidly. Prussia and Austria were on the point of declaring war; and every Italian saw that Italy, in such an event, without alliance, might find her national existence imperilled. Later, the political situation grew easier. On the 8th of April, the terms of a treaty with Prussia were settled, and ratified by Italy on the 14th and by the King of Prussia on the 20th of the same month. But affairs finally reached a climax on the 30th of April, when the Italian Parliament voted unanimously a declaration of war against Austria.

On the following day, May 1, 1866, the minister decreed the *corso forzoso*. A forced circulation was given to the notes of the National Bank of the Kingdom, and to the notes of the Bank of Sicily and of the Bank of Naples, in Sicily and in the Neapolitan provinces respectively. At the same time, the

* *Inchiesta sul Corso Forzoso*, 1868, Scialoja's testimony, vol. iii. p. 464.

National Bank advanced to the government a loan of 250 mil. for the purpose of carrying on the war. Later in the month, the forced circulation was further extended to the notes of the National Bank of Tuscany and of the Tuscan Bank of Credit within the Tuscan provinces.

The circulation on the 30th of April was composed of both paper and specie. The paper* amounted only to some 249 mil., issued by the various banks. The sum of the specie in circulation amounted to 903.5 mil., made up of 430.5 mil. in gold and 473 mil. in silver and base money. Of the gold, 419.5 mil. was in decimal coin, and the remainder, 11 mil., in other forms. The silver, amounting to 423 mil., was divided into 86 mil. in 5 fr. pieces, 119.5 mil. in pieces ranging downwards from 5 fr., and 217.5 mil. in non-decimal forms. The bronze and the brass money amounted to 44 mil.; and, finally, the base money of all denominations—none greater than 1 fr.—was valued at 6 mil. A deduction, however, must be made. Some 15 mil. of bronze money in excess of the needs of the circulation lay idle in the treasury. Deducting this 15 mil. of bronze, we have, as a final result, 888.5 mil., the total specie circulation. The circulation, both specie and paper, then, on April 30, 1866, was 1,137.5 mil. lire.

Whether or no the forced currency was necessary has never been fully settled. In 1868, a Committee of Inquiry † was appointed by the Italian Parliament, which investigated the causes leading up to the suspension; and, after a laborious and painstaking investigation, a majority of this committee reported that the forced currency was *not* demanded on either financial or political grounds or by the economic interests of the country. This report, however, did not remove all doubt. The decision seemed to be in the face of facts, as it was against the overwhelming belief of the Italian people, and later writers have been inclined to deny its soundness. The

* Cf. *Annuario Statistico Italiano*, 1878, Parte II., p. 122. And see *Relazione sulla Circolazione Cartacea* (by Minghetti and Finali, 1875), p. 10.

† The committee was composed of MM. Seismit-Doda, Cordova, Alexandre Rossi, Sella, Messedaglia, Lampertico, and Lualdi. The majority who reported adversely to the action of the minister were Cordova, Lualdi, Rossi, and Seismit-Doda. The minority declared any investigation as to the necessity of the forced currency to be beyond the province of the committee.

question, therefore, is an open one; and, although this article can obviously make no pretence to any exhaustive examination of it, still it is of such peculiar importance to the right understanding of the subsequent financial history of Italy that we must enter into it with some fulness.

The condition of the treasury on April 20, 1866, according to the report* of Alfurno, Director-General, was as follows:—

1. Actual cash	28.0 mil.
2. Notes of the National Bank and of the Tuscan National Bank and certificates of the Bank of Naples	68.0
3. Bronze coin	15.3
4. Credits on foreign banks	1.5
Total	112.8 mil.
Deducting as before the 15 mil. in bronze coin and 2 mil. due to the Bank of Sicily	17.0
Total	95.8 mil.

So far as the needs of the treasury were concerned, the director declared, this amount would probably be sufficient for all service until the middle of the year. For the July quarter of *rentes*, about 100 mil., provision had already been made. Funds had been secured to the amount of 57.6 mil. by stipulating an advance from Rothschild as an instalment on the loan of 425 mil. (May, 1865), to the amount of 25 mil. by agreement with the Savings Bank of Milan for an instalment on the price of the State railways, and to the remaining amount of 15 mil. by two loans,— one of 10 mil. from the Bank of Naples and one of 5 mil. from the Bank of Sicily. About 80 mil. of treasury bonds were to fall due in May and June. The director counted on the ordinary renewal of 10 mil. per month, while, in addition, a renewal of 15 mil. at 3 per cent. had been secured from the Bank of Naples. Still, this would leave 45 mil. of these bonds to be provided for, of which 30 mil. were held by the National Bank. The cash fund was therefore still further reduced from 95 mil. to 50 mil. Account being taken of the customary delay in payment, due to the tardy presentation of the coupons, this sum of 50 mil. would probably be sufficient for the ordinary needs of the treasury. But it would only be sufficient, provided everything went well. If, by chance, events were so to turn that unfore-

* *Inchiesta*, etc., testimony of the Director-General, vol. ii. p. 19.

seen expenditures were rendered necessary, these calculations would have to be changed.

During the ten days from April 20 to April 30, the effective cash in the treasury went down from 28 mil. to less than 24 mil., and the amount of notes held of the several banks diminished from 68 mil. to 50 mil.

To describe the economic condition of Italy at this time is extremely difficult. So many elements enter into it, and these mixed in such confusion, that to give any precise estimate of the strain endured by Italy just previous to the suspension is well-nigh impossible. Perhaps, however, if we go back a little, and try to follow down the general drift of events, we may be able to get before us some sufficient idea. We have seen that not only did Italy have continuous deficits in the budgets, necessitating enormous loans from abroad, but that the foreign trade was largely against her. Obviously, as we have said, such a condition of affairs would tend to produce a demand on Italy for gold. This may be taken as a starting-point for our review of the general movement.

(*a*) For at least two years, *rente* had been coming back into Italy freely, for the reason, among others, that it was higher there than abroad. This was shown, for instance, by the fact that as early as January 12, 1865, the pressure had grown so strong that the National Bank of the Kingdom, by far the most important financial institution in Italy, was forced to restrict its advances* on the deposit of securities as collateral. As the year 1865 went on, credit grew rapidly worse, and a crisis swept over Europe; and, at the beginning of 1866, the rate of discount was standing at 5 in the Bank of France, and at 8 in the Bank of England. In Italy, this crisis was, of course, severely felt. The strain on the National Bank, as the leading credit institution in the kingdom, had become so great that its specie reserves began to be seriously affected; and, early in 1866, it was forced to secure two loans of 2 mil. each in gold, in order to keep up its payments, and these it secured with difficulty. Finally, on January 10, 1866, it sharply restricted its discounts, and refused to advance on

* *Relazione sulla Circolazione Cartacea*, p. 6.

paper not bearing at least three names. The contraction was already stringent; but this action served to intensify the difficulty, for not only was it almost tantamount to a refusal of credit to commerce, but, owing to the fact that numerous lesser banks were accustomed to have paper rediscounted at the National Bank, a refusal to do this at a time when they were already hard pressed left them in a precarious position.

(*b*) Into this general state of affairs in January came a new disturbing element, the fear of immediate war. The loans which Italy had made had vastly increased her indebtedness abroad, as the following figures, showing the foreign payments * for interest by the State from year to year, will indicate: —

1861 . . .	36 mil. lire	1864 . . .	89 mil. lire
1862 . . .	55 "	1865 . . .	90 "
1863 . . .	60 "		

Rente † was now rapidly falling. It had ranged at about 65 during the year 1865; but in February, 1866, it had fallen to 61, and timid foreign holders, recognizing the straits in which the Italian government was laboring, and the near approach of war, were returning *rente* to the Italian market, in order to realize. The director of the National Bank expressly declared ‡ to the Committee of Inquiry, and his declaration was agreed to by the four other great banks,— the National Bank of Tuscany, the Tuscan Credit Bank, the Bank of Naples, and the Bank of Sicily,— that at this time foreign bankers no longer kept Italian paper in their portfolios, having foreseen the probable suspension, but were sending it back into Italy to be sold at a loss, and that in April, 1866, Italian bonds could not be negotiated abroad. This return movement undeniably produced a considerable effect in Italy, particularly in the great cities of the north. Still, its influence was nothing extraordinary, as is sometimes maintained. The country was not flooded with returning *rente* and bills. The rate of exchange § just prior to the suspension, which was $1\frac{6}{10}$ below par on Paris, and on London 24.80 (par 25.22), shows clearly that the amount of paper sent back was not excessive.

* *Relazione*, p. 5. † *Annuario*, 1884, Table XIII.

‡ *Inchiesta*, etc., vol. i. p. 292, testimony of the Director of the National Bank.

§ *Ibid.*, vol. iii. p. 50.

(*c*) But the contraction of credit visible in January grew little, if any, easier as the days went on. The National Bank found its restrictions insufficient, and later, in March and April, was forced to suspend its advances and discounts almost entirely. This left commerce in a desperate state. A heavy pressure existed on all the banks, caused by the steady withdrawal of deposits and the effort to change notes into gold. For instance, the following table * of the five principal banks in the kingdom shows a strong falling off in deposits and running accounts:—

	Dec. 31, 1865.	April 30, 1866.
National Bank,	18.2	24.7
National Tuscan Bank,	10.9	8.1
Bank of Naples,	48.9	35.8
Bank of Sicily,	18.2	17.2
Tuscan Bank of Credit,	2.2	1.6
	98.4	87.4

The increase in the figures of the National Bank is to be accounted for by the fact that funds taken from the smaller banks were put there for greater security. But a falling off of 11 mil. in a total of 98 mil. within four months is certainly an evidence of poor credit conditions. The change is even more striking, if, on account of its peculiar position, we omit the National Bank in our reckoning; for we then have a total for the remaining banks, on December 31, 1865, of 80.2 mil. as against a total of 62.6 mil. on April 30, 1866, or a loss within four months of 17.6 mil.

(*d*) In addition to what we have just described as a general crisis, there now came what may be called a special crisis. The great contraction of credits everywhere, and the flow of *rentes* and bills back into Italy, together with the restrictions of the National Bank on its discounts and advances, began to shake the position of some of the large credit banks, particularly in Turin and Genoa. The *Credito Mobiliare*, for instance, in Turin saw its running accounts † at interest fall to about one-third in four months: 1866, January, 22.8 mil.; February, 21.7 mil.; March, 20.8 mil.; April, 15.8 mil.; May, 8.5 mil. One notes at once that the decrease of 7 mil. from January to May is equal to the increase shown above in the accounts of

* *Inchiesta*, etc., vol. i. p. 294. † *Ibid.*, vol. i. p. 295.

the National Bank during the same period. All banks dealing in commercial paper of any sort were hard pushed. Those, however, which had been accustomed to rely on the National Bank were in a doubly unfortunate position, for this latter institution could now no more than take care of itself.

(*e*) The contraction grew more and more stringent. On April 18, the Chamber of Commerce at Alexandria advised * that the National Bank enlarge its discounts; but this, under the circumstances, was impossible. At the end of April, the climax † was in sight. On April 27 and 28, the *Credito Mobiliare* of Milan and that of Florence, the *Banco di Sconto* in Turin, and other similar institutions, were violently assailed by the public. On April 29 and 30, letters and telegrams were received by the Minister of Finance from Genoa, announcing colossal failures in that city unless the government should adopt extraordinary measures for the relief of the banks and the protection of their specie reserves. A peculiar importance, it should be said, attaches to these events, in that the commerce of Italy centres mainly around a few large cities in the north, and that it was just here, in the worst possible place, that the special trouble existed. And in the already gloomy and depressed state of trade, and with a war almost at the door, there could be no knowledge where the failures, once begun, would end, or how far-reaching would be their financial and moral effects.

This, briefly stated, was the position of affairs on April 30, 1866, when the war was declared.

From the minister's point of view,‡ the situation left little room for doubt. It was true, indeed, as Scialoja declared to the Committee of Inquiry, that the payment of the July quarter of *rente* was assured; § but there then remained in the Treasury but 95.8, of which only 28 mil. was in specie. As to further resources, everything was discounted except certain taxes whose amount for the current year could not be immediately recovered. Leaving aside all question concerning 195

* *Inchiesta*, etc., vol. ii. p. 25. † *Ibid.*, vol. ii. p. 39 *et seq.*

‡ *Ibid.*, vol. iii., Scialoja's testimony, pp. 464–472.

§ *Ibid.*, vol. ii. pp. 20, 21.

mil. of treasury bonds which were in circulation,—of these, 80 mil. falling due in May and June,—he estimated that the war with Austria would call for 600 mil., and that the government needed 300 mil. more. Here, then, was a need for 900 mil. in the presence of a cash balance of 95.8 mil. at the outside. A loan was out of the question; for the loan of 250 mil. which the government had tried to make in March had proved impossible, and things were far worse now. No encouragement could be drawn from the public. During April, the crisis had grown almost hourly more intense. Foreign merchants refused to give credit, and were sending in their demands to be collected at any price. In the general panic, information came of the imminence of failures of the highest importance, if certain banking houses were not protected. What could the minister do, with Italy unable to borrow, industry calling for help, and a great war, involving the national existence, to be fought? One obvious way out of all these difficulties was still open, and the culmination of events left no choice but to take it. On April 30, Parliament voted with but one dissenting voice to give the minister power to take extraordinary means to carry on the war; and on May 1 the forced currency was decreed. The public received the announcement with satisfaction, and the Chambers of Commerce of Florence and Genoa voted thanks to the minister.

From the point of view of the Committee of Inquiry in 1868, the situation presented a far different aspect. Obviously, the treasury was not insolvent, and therefore did not need the *corso forzoso*. As to the economic conditions of the country, the committee declared that the general crisis was lighter, or at least was no more severe in April than in January; that the amount of the returning *rente* and bills, when compared with the total amount, was insignificant; and that the special crisis was due to but *four* banks, whose difficulties were owing mainly to their own mismanagement. After this summary disposal of the salient facts, the committee naturally concluded that the forced currency was not demanded on economic grounds. The one point remained, then, how to find money for the war. This was easily done. The days just before the war were days of extraordinary enthusiasm and great patriotic

fervor, when party disappeared, and all men were alike eager for a struggle that would free Venetia from Austrian tyranny and consummate Italian unity. These pleasing emotions, the committee thought, should have been turned to practical account. Either a voluntary loan should have been made for the support of the war, or, if such a loan seemed likely to prove unsuccessful, then a forced loan should have been levied on the better provided classes.

Both of these views, so far as they concern the economic situation of the country, are unquestionably exaggerated. The minister undoubtedly overestimated the amount of panic prevailing, and the committee undoubtedly underestimated it. The truth lies, as our statement has tried to show, somewhere between the two.

We have already said that we do not propose here to make any attempt to answer definitely the question whether or not the forced currency was a necessity. Such an attempt lies obviously far beyond the necessary limitations of this article. We may, however, obtain a much sharper view of the problem, if we examine it in the light of the means proposed for its solution. What were the real facts of the situation, so far as we know them? They were these: *first*, the position of the treasury was solvent, but it could do little more than care for its ordinary daily needs; *second*, a severe contraction of credit existed, owing to a general crisis, which was more or less intensified by the returning *rente* and bills; *third*, a special crisis of some magnitude existed in the very heart of commercial Italy; and, *fourth*, a war had just been declared which would demand at least 600 mil. for its support. Now, let us further ask, How, given these data, could the sum required for the war best be secured? Since a foreign loan was admittedly impossible,—*rente* * stood at 43.90 in Turin on the day before the suspension,—there were but two ways left: either to declare the *corso forzoso* or to rely upon a loan, voluntary or forced. The advantages of the forced currency are obvious, and also the disadvantages. We need attempt no particular

* *Relazione sulla Circolazione Cartacea*, p. 8; and see diagram, *ibid.*, p. 220, for movement of exchange, five per cents. and gold, 1866-75.

elaboration of the one or of the other. There could be but one reason sufficient to justify its introduction, and that of a negative sort; namely, that the other means proposed seemed unavailable. So far, therefore, as an examination of the question is possible for us here, our problem will lie in the consideration of the voluntary and of the forced loan.

We may simplify the inquiry still further by putting out of mind any thought of a voluntary loan. Italy may indeed have been half-mad with enthusiasm; but enthusiastic patriotism is a feeling widely separated from pocket patriotism. Without doubting for a moment the sincerity and depth of the patriotic feelings of the Italians, we have no reason to believe that a voluntary loan would have yielded any appreciable amount of money. Voluntary loans are seldom, if ever, successful. There have probably been few populations so stirred to the depths as the German in the beginning of the war of 1870–71. Yet the German voluntary loan yielded only a few hundred thalers! We will go on the supposition, therefore, that a choice existed only between the *corso forzoso* and relying upon a forced loan.

The main objections against relying upon a forced loan sum themselves up in the present writer's mind to three in number, together with a preliminary difficulty. These are: *first*, the strong chance that the forced currency must be decreed under any circumstances; *second*, the probability that a forced loan would prove insufficient; and, *third*, the serious risks that were necessarily involved in a forced loan. We will touch upon these very briefly in order.

The preliminary difficulty lay in the collection of the forced loan. To say nothing of the fact that it must be raised from a country which was in a half-panic condition and taken from a people whose taxes had almost doubled in five years, the returns from such a loan would require considerable time for collection,— at least, the fifteen days required in an anticipation of the ground tax. This delay was inevitable, and it involved the objection that the minister could feel no certainty that either the war or the panic would wait until he was ready to receive them. Still, we may pass over this difficulty with a mere mention; for it was of little weight when compared with the other considerations.

The first objection urged was that a strong chance existed that the suspension would have come under any circumstances, even though it had not been directly necessitated by the war. For consider what Italy's general movement had been. Italy began her national career with a debt of 2,300 mil., and in the first five years of her existence, in spite of the most desperate efforts, was forced to double this by the addition of 2,500 mil. more of nominal debt from loans. The foreign trade during all these years had been moving strongly against her. Lanza, a leading deputy in the Italian Parliament, declared* to the Committee of Inquiry that the causes of the suspension were clearly in operation as far back as 1861. Affairs, however, had grown worse and worse. If a forced currency seemed to be coming in 1864, certainly it must have been close at hand in 1866, when, under conditions infinitely more severe, with a treasury unable to do more than barely care for its own needs, there came an imperative demand for 600 mil. for the war. But whether it was necessary or not is not here the point. All that is here called to view is that the general movement had been rapidly downwards. If we omit the other considerations, a country which lives on foreign loans, secured only by the payment of a high premium, is surely generating the necessity of a forced currency. There could be but one reason sufficient to justify ignoring this obvious tendency; and this would lie in the hope that, if the war were struggled through with somehow, without recourse to a forced paper, Italy after the war could continue to hold a specie basis. Certainly, we have reasonable ground for doubting this. A successful war would undeniably bring its benefits. The long struggle with Austria would be at an end, and Venetia would be united with the new kingdom. But these benefits, financially speaking, could not be realized for years to come. So far as any immediate financial change was concerned, little could be expected but a repetition of the old story of deficits and loans, and an unfavorable foreign trade. If Italy before the war, and even before the fear of war, was moving steadily and rapidly towards suspension, there was little reason for hope that Italy, after the war was done, loaded down with new burdens and

* *Inchiesta*, etc., vol. iii. p. 135.

perhaps impoverished, would be in any better situation. On the contrary, the new debt and the burdens of the war would leave the country worse off than before. Every element which had been making towards suspension before the war would have been making towards it afterwards with added strength.

The truth of this may be seen by the actual facts. Italy's finances showed little, if any, improvement for at least three or four years. As it was, with a war favorable beyond expectation and short beyond hope, the budget deficits until 1870 grew but little smaller, and this in spite of every exertion, in spite of rigid economy, and in spite of the most severe taxation,—taxation touching almost every article that entered into either the essentials or the enjoyments of the people, bread, meat, salt, fruits, tobacco. Not until the year of the occupation of Rome (1870) did Italy begin positively to forge ahead. And the real cause of this new progress lay primarily, in the writer's view, not in Italy at all. It lay rather in the speculation and in the demand for investment brought about by the Franco-Prussian war and the after payment of the French indemnity. A species of hot-house growth of credit and industry was caused, which, disastrous to other countries, was yet, owing to Italy's peculiar conditions, on the whole both advantageous and healthful for her. The current of events before 1866, then, was unquestionably sweeping Italy towards suspension. There could have been little reason, at least at the time when the suspension was decreed, to believe that this current would change its course. Affairs had to grow worse before they could grow better; and, on the whole, we may perhaps not unreasonably conclude that, so far as could then be seen, even if the war did not directly necessitate a forced paper, this must probably have been Italy's destiny in the end.

We pass now to the second objection. Apart from the general drift of affairs, there was a strong probability that the forced currency would be rendered necessary by the utter insufficiency of the forced loan to carry on the war. Of course, the war was surprisingly short. Austria's military strength was rated second only to that of France. No one even dreamed that the struggle would last but six weeks; and, indeed, if before the war, when Prussia's military strength

was a practically unknown factor, any one had prophesied so speedy a termination, his words would have seemed mere nonsense. The whole question of victory or defeat lay in the doubtful strength of Prussia, for all that Italy could do at best was to make as large as possible the number of Austrians required to give her a sound drubbing. If now, as at the time seemed so likely, the war were either disastrous or prolonged,— if, for instance, Austria could have held Prussia at bay, so that her army after the victory at Custozza and her fleet after the victory at Lissa could have overwhelmed Italy in a war which, for existence's sake, Italy must yet fight to the bitter end,— would one forced loan, or two, or three, have been sufficient to enable Italy to continue such a struggle? Obviously not. As it was, the war, though so unexpectedly short, cost * some 870 mil. lire. It is doubtful if more than one forced loan could have been successfully made. Certainly, in view of Italy's position, a long war could not be fought through on loans alone. How, then, could the expenses have been met? There is but one answer. If the war were prolonged, the forced currency must be declared.

Both of these considerations deserve careful attention, although they do not directly touch the real root of the problem. We seize this when, in the third place, we come to consider the serious risks connected with a forced loan in view of the economic situation of the country. Reliance upon a forced loan meant that the Government would do nothing to ease credit or to lighten the existing strain, and that it would leave to their fate the banks which were calling for aid. This was a very grave matter. There are three points in the economic situation to be considered. We know, first, that credit was in general severely strained, that every measure the National Bank had taken looking towards its own safety had made the distressed situation of commerce more precarious, that the already strong demand for gold was being increased by the need of the Government, on the verge of war, to make purchases in specie, and that the sinking of deposits and running accounts showed an actual feeling of panic. We know, second, that, if certain credit banks were not supported, their failure was inevitable, that with them would go down the

* Sachs, *L'Italie*, p. 50.

interests dependent on them, and that, from their position in the very heart of Italy's industrial life, their failure might have crippled industrial and commercial interests throughout the peninsula. In itself, however, neither of these considerations is strong enough to call for a suspension; but it was the introduction of a third element which gave them their vital importance. This new factor was simply this: that, after the panic had had full play, the war had still to be fought and the money for its support had still to be raised. In a time of peace, the situation would have been grave enough to rouse deep apprehension. But, if the forced loan were made the chief reliance before the war had even begun, commercial interests, if not prostrated, would at least be severely crippled, while the expenses of the war would be left entirely unprovided for.

So far then as the question was one of temporary expediency, there was little room for doubt. A forced currency would tide the State and the banks, together with the people, over their present difficulties, and would send Italy into the war free from any danger of ruin going on at home. Further, the suspension would protect the specie. Italy could not afford to be stripped of the precious metals; but a disastrous or a prolonged war would have swept the gold out of Italy as leaves are blown before a storm. Beyond doubt, if there was any immediate prospect of the *corso forzoso*, it was wiser to decree it then, when it would save the country from danger of commercial disaster, when it would give the Government instant means for carrying on the war, and when, by protecting the specie, it would leave Italy in the end in an easier position. So far as the question was one of a broader expediency, looking beyond the temporary distress to the future, perhaps quite as much may be said. First of all, there was the strong doubt whether Italy could hold to the specie basis under any circumstances. Then there were the multifold considerations to the effect that Italy was in too distressed a condition to sacrifice anything for the future, and that the burden of a forced paper, even though ultimately heavier, could be easier borne than the present burden, since the effort would be extended over a long period,— and there is something to be said concerning

the intensity of a financial strain as well as concerning its duration. Finally, it is right to mention the view of those, like Scialoja, who believed, contrary to what proved to be the case, that, if once this vital crisis were tided over by means of the forced currency, Italy could rapidly put herself again on a specie basis, and be but little the worse.

So much, then, for a statement of Italy's position and prospects on the day of suspension. The subject, though accurately, has yet from necessity been too vaguely handled to enable us to draw any legitimate conclusion from what has been said. The view of the present writer, however, may perhaps be given; and it is this,—(*a*) that, in any absolute sense, the suspension was not necessary. Italy could probably have gone through the war and found herself at the end without a paper currency. Such a conclusion, however, is barren and of little value, for our question is not one of necessity nor of what from the stand-point of after events appears reasonable, but solely what at the time seemed most expedient for the best interests of the country. (*b*) That, in any broad sense, the suspension was the wiser course. Taking into consideration the general movement and prospects of Italy, the question of the war, and the distressed economic situation, the conclusion that a forced currency was demanded seems a natural one. Undoubtedly, it would have been better if some way not involving long-continued loss could have been found. Undoubtedly, it is hard to be obliged to discount the future. But the desperate conditions actually existed. There was only a choice between evils. The choice does not seem to have been made lightly; and, in the view of the present writer at least, it was made of the lesser evil. Still, when all has been said, the question is an open one; and such it will probably remain.